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AMERICAN POULTRY WORLD

AUGUST, 1916

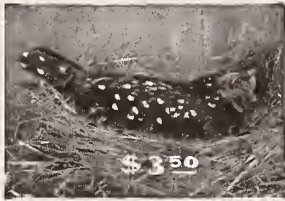
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142 Main Street, 158 Pearl St.,
LOCKPORT, N. Y. BUFFALO, N. Y.
President . . . GRANT M. CURTIS
Vice-President . . . A. O. SCHILLING
Secretary-Treasurer . . . WM. C. DENNY

SUBSCRIPTIONS

Fifty cents per year in advance. Five cents per copy. Ten cents per back number.
FOREIGN, one dollar per year. Canada seventy-five cents. Ten cents per copy.

Subscriptions can begin with any month.
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Advertising Rates Made Known on Application

Entered at postoffice, Buffalo, N.Y. as second-class mail matter

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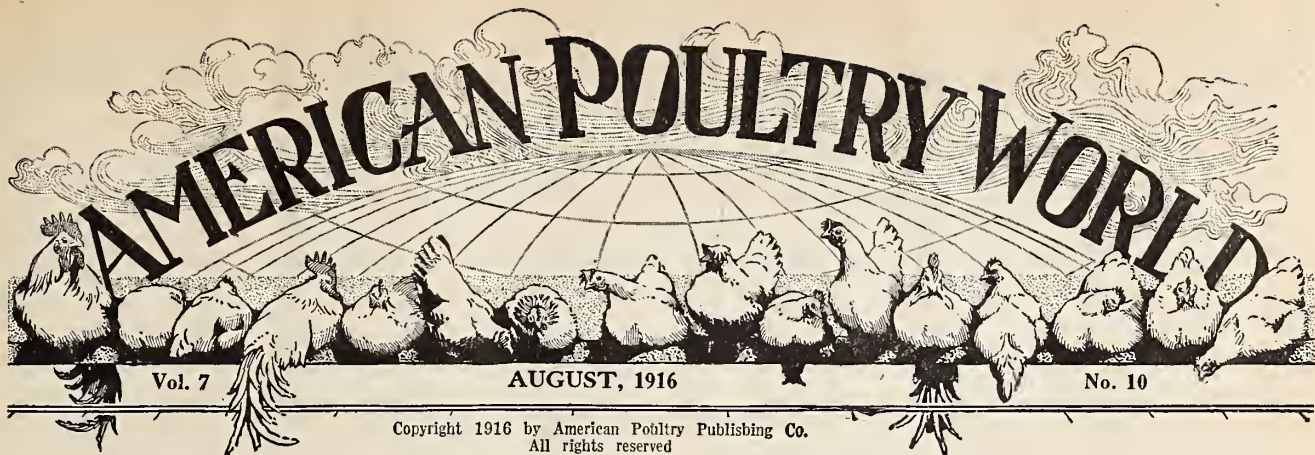
POULTRY FOODS
AND FEEDING

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**POULTRY FOODS
AND SUPPLIES**



The rapid advance in popular favor of the Ancona has been rivaled by few Standard varieties of poultry. Belonging to the Mediterranean family, it is noted as a prolific producer of white shelled eggs. A great deal of the reason why Anconas have advanced in popular favor is due to the great improvement that has been made in color. Plenty high class specimens can now be found that are evenly mottled and the white spangled tips on the green-black background that forms the body color of the fowl make them attractive, indeed. H. Cecil Sheppard, Box W2, Berea, Ohio, has been largely responsible for much of the improvement that has been made in this variety. Mr. Sheppard has made a close study of Anconas and is an authority on the variety. The birds of his breeding have won in the leading show rooms from the Atlantic to the Pacific and his own entries have been highly successful at Madison Square Garden and other prominent shows. The above illustration shows a pen of recent winners at Madison Square Garden and Cleveland.



OVERCOMING DEFECTS IN BUFF ORPINGTONS

Well Known Breeder Emphasizes the Necessity of Proper Selection of Breeders. Lays Stress on Importance of Breed Type. Says Extremes of Color in Mating are to be Avoided. Buff Orpington Popularity Growing Rapidly. Is One of the Six Most Popular Varieties in America

By MAURICE F. DELANO, Proprietor of Owen Farms

EVERY true fancier is a member of a large family which includes the men whose bread and butter depend on their ability to produce the highest excellence; the men who breed pure-bred poultry as a side issue, but also as a means of augmenting their incomes, and the men who breed thoroughbreds for recreation or for the love of it, but to whom the commercial success or failure of their hobby is not of particular moment. At heart these cousins of differing personalities are very similar, and they are equally fascinated in watching the chicks shape up, and can hardly take their eyes from the specimens that promise to land the laurel wreaths at the coming shows. No class of fanciers in the world are abler men, better sportsmen, or have a harder color to produce in its perfection, than those devoting their energies to perfection of buff color in the various breeds.

Considering its hybrid origin, the Buff Orpington has made wonderful advancement, and the best specimens average fully as good in color as do the Buff Rocks and the Buff Wyandottes. These latter varieties were originated just a little earlier, but had much less alien blood of absolutely foreign color that must be eliminated to produce the soft even buff color so coveted by all breeders of buff fowls.

The Buff Orpington of today breeds remarkably true to both type and color and the percentage of decided culls is but little larger from flocks bred from properly mated pens than it is in flocks of the older buff breeds. A few more years of careful selection will put them on a par from a fancy stand-point with any of their sister varieties.

The commonest shape faults in the variety as we find it today are: a little too much length of shank; breast not quite full enough, and keel not quite level enough for true Orpington type, which should be long and broad as well as deep, in fact a low down bird of tremendous frame. A tail carried too high will shorten the apparent length of a bird, and the majority of males show this defect to a more or less degree. Great strides are being made every year in correcting these shape or type faults and the progress made is most encouraging.

The list of color defects will take longer to eradicate, but this is true of any variety in existence. If it were possible to produce birds approaching perfection in a majority of our flocks, our interest in the science of breeding would cease. White showing in under-color of hackle, in wings, and at base of tail is a fault it will take many years to completely rectify and not lose our richness and evenness of color. Minor color defects that are fast disappearing are: red wing-bows in males; penciling or ticking in females; bluish legs, a trace of their Hamburg ancestors; and mealiness and patchiness in both sexes. Other defects that will be a little troublesome for some time are

stubs on legs, and yellow shanks showing Cochin blood; side sprigs on comb, and white in ear-lobe two more reminders of the Hamburg blood. The writer has seen but one specimen showing the fifth toe of the Dorking, so that possible defect can be ignored.

The above list of defects appears quite formidable but is no more so than can be written of any variety if we tabulate all the faults appearing in the poorest specimens raised. In the proper mating of any flock of poultry we should strive first to produce the breed type, second, to improve the color of plumage; and third, to perfect the minor points, such as comb, eye, lobe, and legs. I will take them up in this order.

Breed Type Emphasized

Too much stress cannot be laid on the importance of breed type in any variety: A poorly shaped Orpington can approach the Plymouth Rock, the Wyandotte, or worse yet, the original Hamburg in type. This last is getting rare and of the other two, the first is least objectionable. Select a male as good in type as you possess that is not really bad in other desirable sections; and mate with him the best colored hens you have that are up to, or over Standard weight. If your male is poor in comb, be careful to have hens as good in this section as possible. (Do not, however, sacrifice shape and size to comb. Our American taste demands a low Plymouth Rock comb on our Orpingtons and this is not natural to the breed. It will require patience to produce good combs without sacrificing size.) Such a mating will produce large boned birds that have size and type in a goodly percentage. If the chicks lose in color, this weakness can be rectified in succeeding matings. As a rule the male will influence the color and type more than the female does, while the latter influences the size. For this reason I would prefer a smallish male of really good type to a tall gawky male having nothing but size and color to recommend him.

Among the first principles of color mating there are a few points I wish to make most emphatic. Never, under any circumstances, use extremes of color. Never use a female in your best pens showing mealiness over the wing-bows. Never use a reddish female with the web of the feather very pronounced, or as we say, "shafty." Never use a male with a red hackle, and at the same time white in "undercolor" of hackle. Good buff color was never produced by using birds indicated above, excepting in an occasional chance specimen.

How to Obtain Color

In mating for color, I first select the best colored males I have available that have no bad cuts in other sections. These birds I line up, and carefully compare their breeding possibilities from a color stand-point, taking the known



qualities of their direct ancestors into consideration. After selecting the most promising bird, I go through our flock of females and select even colored birds ranging from the same shade as the male to two tones darker. I make color the first consideration in selecting these females, but also carefully weigh their breeding, and choose only those that have the proper blood lines to nick with the male, and that are strong in the sections where he is weakest. This insures improvement all along the line. This process is repeated with each one of my selected males; in each case using females that are not over two tones away from the male in color. The lighter males are mated with females that are absolutely sound in under-color in every section. It is not necessary to mate dark females with such a bird, as the lighter females that are sound under will have the necessary strength of color pigment to mate with a male whose origin is known. The darker males are usually very sound in under-color, yet the same rule applies, and females mated with them are even and rich in color, with sound under-color. In all selected females, I avoid absolutely all mealiness and shafting when possible. Also give the preference to hens that have moulted right, and to pullets that my experience has taught me will make fine hens.

Extreme matings containing dark birds of one sex and light birds of the other will never produce medium shades. The result will be unattractive patchy pullets with dark hackles, and uneven cockerels with dark hackles and wing-bows. Cockerels from an extreme mating usually average slightly better quality than do pullets. The contrary is true of a proper mating as it is easier to produce sound colored pullets in quantities than it is to produce sound males.

In correcting comb and eye defects I am careful in every mating I make, whether primarily for shape, or for color, to have good eyes and comb on either male or females. When possible, I avoid a decidedly bad comb in either sex. I do not believe it practicable just now to discard an otherwise fine male for a large, or unevenly serrated comb. This section will adjust itself with time and should not be allowed

undue prominence. We all admire a five point comb that is perfectly serrated, but the longer we breed our favorites the more this section seems to diminish in relative importance. Never breed from a bird having side sprigs, or from one having stubs on shanks.

Leg color runs very good in the breed. A small percentage still show bluish shanks, and a still smaller number come with bright yellow legs. Simply do not breed from these birds no matter how good they are in other sections. Bright red eyes on birds of extra good color are not plentiful. Have made decided progress this year in this section, and a few years will largely do away with our greenish, yellow, and fish eyes. As I said before, if you use a male with poor eyes, rectify the defect in your females, and vice versa. There are a very few fanciers of any bred that do not admire a buff bird of the true golden shade, and of even color. The writer has bred over twenty varieties since he began eighteen years ago, and the buffs have always been first in his affection. My long experience in breeding Buff Rocks and Buff Wyandottes is extremely valuable in producing proper color on the Orpingtons. Today, I am completely cured of my prejudice against the white legs and skin of the Orpington and can watch our Orpington and Rock Chicks running side by side with equal pleasure. It is a keen delight to note the improvement in both varieties, and it is still an open question which will produce the best colored bird this year. That the Orpington stands a chance in such a competition shows decided improvement, and we have cockerels and pullets of both varieties without a trace of foreign color in wing or tail.

The Buff variety has proven itself to be the best of the Orpingtons, and has firmly established itself as one of the six most popular varieties in America. Its intrinsic merit will retain it in the proud position it has attained, and probably place it near the top of the leading six. It is a fowl for the fancier, the egg farmer, and, as the popular prejudice against the white skin and legs disappears, it will be a very popular fowl for the broiler and the capon man.



FIRST PRIZE HEN
BOSTON SHOW, JAN. 1915
BRED & OWNED BY D.W. YOUNG, MONROE, N.Y.

To appreciate truly genuine Leghorn type, there is nothing better to study than a true to life portrait of a fine mature hen—unless it be several portraits of the same individual in different poses. A bird can hardly be appreciated in the show pen. In the home yards is really the place to discover a fowl's finest carriage and beauty, although show-pen manners are what necessarily count in an exhibition. It is interesting to note that the right-hand view of this prize winning S. C. White Leghorn hen portrays her in a pose nearest to the 1910 Standard and that the left-hand view reveals her in a pose that very nearly approaches that which has been adopted in the Standard that is now on the press. It illustrates how much can be accomplished in the pose of a symmetrical, well-trained show bird. In either pose she is quite symmetrical, although perhaps in the left-hand one (resembling the 1915 ideal) she appears more at ease. In the central pose she may appeal to those who would especially admire her for her full breast, substantial body and breadth of hips. She evidently has ample room for the organs of egg production. Her length of legs in this view reveal a style that is not found in types that are over dainty and too small. Altogether these three studies exhibit the very practical kind of generous laying hens that are profitable all the year around and are sensational as show fowls. In other words, she is a D.W. Young improved sort—F. L. Sewell.

FEEDING WYANDOTTES FOR EGGS

Food Alone Cannot Make Good Layers. Must be Bred-To-Lay Stock. Manner of Feeding is Very Important. Producers of Table Eggs and Eggs for Hatching Should be Differently Fed. Condiments Not Necessary. Regulate Feed According to Weather and Actions of Birds. Beef Scrap of Importance

By DR. N. W. SANBORN, Holden, Mass.

WHILE nearly all my twenty-five years' experience in feeding poultry has been with Wyandottes, I know something of the breeding and care of other breeds. I early found that the best ration for Wyandottes did not exactly fit the needs of Leghorns and Plymouth Rocks. I realize that there is something more needed, in order to get plenty of eggs, than just food. The best feeding in the world will not make good layers out of a strain of poorly bred layers. At the same time I know that some bred-to-lay birds will do splendidly along egg lines on badly balanced rations.

The following is my experience with bred-to-lay stock. Eighteen years ago, out of one pen of my White Wyandottes, came the eggs that produced a flock of pullets that averaged 210 eggs each pullet in the first year's work. A few years later, when I had settled on the Buif Wyandottes for my business birds, I got from one pen of pullets selected from a fancy standpoint an average of 191 eggs in ten and one-half months of laying. These birds laid more than this number of eggs in the first year's laying, but no record was kept until the flock as a whole got to work. Since then I have had pullets that laid as many as 208 eggs in their first year. Two year old hens that gave me 135 eggs and my winning pullet at Cleveland, 1902, laid 120 eggs in the spring and summer of her sixth year.

How and What to Feed.

Given a flock of well bred Wyandottes, housed under proper conditions, kept free from lice and mites, what shall they be fed? This is a question that needs thought. At the same time, I believe that how they are fed is nearly as important as what they are fed. There are two methods of feeding practiced to-day and they can be used separately or combined. One is the old plan of wet mashers with other foods, and the second is what is known as the dry, hopper method. So far as egg records are concerned, no better ones have been obtained under one method than the other. I believe that the dry food method is safer to use, there is less illness under its adoption and it is being followed by many of the large successful plants. It is the method to follow where hired help of inferior quality must be employed.

If I were to feed a flock of hens and pullets for a high egg record I should be glad to have raised the birds from the start. I should have fed the three-day-old chicks a little cracked wheat with fine grit. They would have under their feet, in the brooder, two inches of the waste from my barn loft. At the sixth day a small hopper of finely sifted high grade beef scrap would be added. Then at fourteen days I would make the grain ration finely cracked corn, one part to three parts cracked wheat. Lawn clippings, cabbage and lettuce would be their green food from day to day. Access to grass would be given on pleasant days. When brooder heat was no longer needed these chicks would have roomy roosting coops, have free access to cracked corn, wheat, beef scrap and grit, and have as wide range as I could give. These chicks I should expect to mature into pullets that are lively, fully up to weight, healthy in every way, and ready to be handled for either the winter layer or breeder.

Feeding for Special Purposes

Feeding for table eggs and feeding for eggs-for-hatching are not the same problem. The business layer we feed for the largest possible number of eggs. We treat her as nearly like a machine as we can. We desire to get the cream of her product in one year's work and then replace her with another pullet. The producer of future generations of hens is never stimulated for eggs, is not rushed with a record in view, but is handled to produce fertile eggs, with strong germs, out of which will come chicks that are sturdy.

To feed Wyandottes in the best manner to produce winter eggs you should pen hens and pullets apart. The only difference I make in getting eggs from hens and pullets is to

have more litter in the pens of hens. This calls for harder work in the getting of the whole grain and usually they get less of it. My feeds, dry mash and whole grain, are the same for old and young females.

The foundation of our feeding of Wyandottes is the mash. This is little varied during the winter and differs in summer in having more bran and less corn meal. My females, coming off the roost in the morning, find a well filled hopper of mixed ground grain and meat. This is just the same mixture I use to mature my pullets in the fall. It is made by measure of four parts bran, three corn meal, two clover meal, and one of high grade beef scrap. The scrap is nearly all meat, hardly any bone and waste. This mash is well mixed, put into self-feeding hoppers and is always within reach of the hens and pullets. Along about 10 a. m. each day some green food is given. It may be apples or cabbage in the fall, mangels or carrots in the winter and turnips in the spring. Sometimes this green food is varied by a measure of steamed cut clover. An hour before sunset a feed of whole grain is given. This varies from day to day, corn being given one day, wheat the next, barley the third, with perhaps a mixture of the three the next day. I intend that there shall be at all times a little of some grain to be found in the litter by deep scratching. Enough is fed at night to satisfy the needs of the fowls and leave a little for the early riser the next morning.

Feeding Condiments and Beef Scrap

Very little spice is needed in our winter food for eggs. Black pepper and ginger, with salt, are all the condiments that I use. These are given in the dry mash as I would use them to season my own food. I depend more on the pure, cool air of my cloth front houses to maintain egg production, than on the use of egg stimulants. Exercise is worth more than "eggpowders" in the common sense care of our laying stock. A cold week in winter calls for either more corn meal in the mash, or more whole corn at night. The price of grain may make some difference in the selection of your food. The cost of things does not matter much so long as you get the profit you desire.

If I find my hens tossing out the mash in search of pieces of meat I at once increase the amount of beef scrap. This may be done in the mash, or a hopper may be filled with meat scrap alone.

With the coming of spring I increase the amount of green food, give less whole grain, and reduce the quantity of litter in the pens. As the grass starts and weeds grow, the females are given the use of large yards. The garden waste is thrown into the pens. Thinnings of all sorts—beets, corn, lettuce and weeds—find a use in the hen yard. The mash is made one-half bran, meat scrap is fed freely and the pens are cleaned of litter and filth.

As the most important single article in the getting of plenty of eggs I would put beef scrap. This may not be so great an egg food as green cut bone, but it is easily obtained, easily kept sweet and it is handy to feed. It is a food so useful that care ought to be given to get the best. The difference in price between a high grade article and one only fit for fertilizer is so small that it should never be considered in the getting of eggs. At three dollars per one hundred pounds, a high grade beef scrap is a cheap food in the production of table eggs. If you can get fresh green bone at regular dates, at a cent a pound, you will find it helpful in your feeding. A noon feeding, twice a week, all they will eat, will supply the need of animal food. The dry mash can remain as before with all scrap left out.

Given a bred-to-lay flock of Wyandottes, cared for and fed as I have outlined, you should be satisfied with an egg yield of less than one hundred and fifty eggs per pullet. Others are doing it. So can you.

HOW TO MAKE WHITE LEGHORNS PAY

he Story of a Successful Poultry Farm in Pennsylvania, From Which the Owners Cleared \$1,900 Profit in One Year and Increased the Original Investment of Two Thousand Dollars to Over Seven Thousand Dollars in Six Years

By LE ROY SANDS, Hawley, Pa.

IN WRITING this article, it is my intent to tell of the qualifications that I think one must possess to become a successful poultryman, and also describe the methods that enable us to make a net profit of nearly two thousand dollars from eleven hundred S. C. White Leghorns.

In the first place, one of the first essentials for success in poultry breeding is an inborn liking for the business. It is plainly evident to succeed in any line that we must possess a strong liking for the lines we are to follow, otherwise we will fail to put forth our best energies, and as success is measured in proportion to the efforts that we put into our business, unless it be our best effort, we can not expect our full measure of success.

Poultry raising in any of its branches if followed for financial ends, becomes similar to a manufacturing business and the same as the manufacturer of machinery, shoes, etc., requires the same application of business methods in order to succeed. In other words, you must keep books with your hens, charging every item of labor, food, etc., and giving credit for all returns. With such business methods mix a liberal amount of common sense and the balance is easy.

I decided to enter the poultry industry with the view of building up a business that would prove profitable from a financial standpoint. I interested a friend in the project and we secured a farm of twenty-two acres with a very desirable southern slope and good natural drainage. The farm secured we immediately erected buildings and began operations. By constant watchfulness and close attention to details, our first efforts were flatteringly successful, and we planned to increase the plant. Each season we have made additions to our buildings or equipment, doing this out of the profits of this business. Beyond our original investment we have never invested a dollar in the plant except that derived in profits from the business. Starting with one building, we now have four large laying and breeding houses, an incubator cellar, equipped with a mammoth incubator; besides several individual machines, a brooder house with a hot water brooding system of twenty hovers and several colony houses and brooders equipped with adaptable hovers. In addition to this we have made extensive improvements upon the farm in the way of clearing up rough fields and putting them under cultivation in order to secure better range for our birds. We also drove a ninety foot well and erected a wind mill with a storage reservoir of large capacity. The water from this is piped to all buildings on the farm, giving us a convenient and never failing water supply. All of this and many other small details was accomplished in a period of six years. Starting with an original investment of approximately two thousand dollars, we have a plant worth at a very conservative estimate, seven thousand and five hundred dollars, above all of this we have a neat bank balance to the credit of the hens. This has been accomplished by applying strict business methods, that is, by keeping books with our hens, charging every dollar invested up to them and placing to their credit every dollar received from sales. Not only have we increased the original value of our plant over three-fold, but we have a balance to the credit of the business that more than off-sets the original investment. So much for the financial side of the business and the methods to which I attribute our success.

Houses

I will now say a few words in regard to houses; these are all of the curtain front type, the design varying to suit our own ideas. They are all constructed with three tight sides with front composed of windows and muslin curtains. The curtain is placed high enough above the floor so that the cold draughts can not strike the birds when confined to the house. The window is added to give additional light to the interior on days that the weather is such that the curtains can not be opened. The houses vary in width from twelve to twenty feet, and in length from forty feet to one hundred and ten feet. Concrete floors are laid in each, making them practically rat proof and also easy to clean.

Proper housing is one essential to success, but the most important is good stock. This should be of the best, as more depends upon this one point than any other part of the business. In starting, we secured the most vigorous birds obtainable and by careful breeding, good food and strict attention to cleanliness, as well as numerous other little details that only come by experience, we have kept them so.

Our plant was started principally for commercial purposes, the breeding of birds that would produce a profit, a profit on the product sold at regular market prices. But as our operations extended and as our success has become known, a demand has been created for breeding stock, eggs for hatching and baby chicks, and this promises to develop into a profitable branch of the business, and we expect in the future by catering to the demands of this trade to greatly increase our profits over those shown in the past. The value of standard-bred poultry is fast becoming recognized and the breeder who makes a specialty of producing healthy, vigorous stock with utility qualities well developed, yet keeping well within bounds of standard requirements, is bound to have ready demand for stock, eggs for hatching, or day-old chicks. We look upon the latter as a very promising branch of the industry and the demand for baby chicks is already greater than we are able to supply with present equipment.

Marketing the Product

First comes the production of the product, then the marketing. Here it is just as essential that the little details be not overlooked as in any other part of the business. It behooves us to secure the best market at the best prices for our product. We ship mostly to the high-class retail stores in New York City, where we receive a premium over market quotations. To be sure, at some seasons it is necessary that we turn a few cases of eggs in to the commission man. His fee for handling these is 5 per cent. This makes a slight difference in the price, but the surplus has to be marketed. The prices range from 25c per dozen in the season of plenty to 60c per dozen when fresh eggs are scarce. To secure the highest quotations, they must be strictly fresh, carefully graded and clean. We use the ordinary thirty-dozen-egg case and shipment is made by express.

Capacity of Plant

The housing capacity of our plant is twelve hundred hens. This is the number placed into winter quarters, usually this is reduced somewhat during late winter and early spring by selling breeders. The birds are put into the winter quarters about October first. Those not used for breeders are fed for egg production and are kept as long as they prove profitable. As soon as they stop laying they are marketed, as it is important to dispose of non-producers as quickly as possible. We plan to have our stock consist of 60 per cent. pullets and 40 per cent. hens, and have been successful in keeping to about this average.

The production of eggs has averaged approximately one hundred thirty-two eggs per hen for the entire flock. Some selected birds do considerably better, but considering the size of the flock we are very well satisfied with the showing. The average price received for these during the past year was 31½ cents per dozen. The sales from the plant reached a total of \$4,400 at market prices. The expenses, including feed, labor, upkeep of plant, etc., were a little under \$2,500, leaving a net profit of over \$1,900 for the season's work.

As both my associate and myself are engaged in other lines and devote only a small portion of our time to actual work on the plant, it seems to me as if this were doing fairly well. This figure can be increased by increasing the stock, which can be done with only the extra cost of feed and no increase in the cost of labor.

The laying stock are housed on the unit system, each flock containing from 100 to 400 head. These are provided with generous range during the open sea- (Continued on page 747)

DEVELOPMENT OF THE DUCK INDUSTRY

Origin of the Duck. Standard Varieties Most Profitable. How Best to Start. Pekins Most Popular Market Duck. Runners Best Layers. List of Recognized Varieties. Standard of Perfection Helpful to Breeders and Exhibitors.

THE many varieties of common wild ducks are the source from which have come all of our domestic breeds. These ducks inhabit the greater part of the Northern Hemisphere, reaching in the winter as far as the Isthmus of Panama in the New World, and in the Old World, at the same season they are abundant in Egypt and India. In summer they range throughout the fur countries, Greenland, Iceland, Lapland and Siberia.

The domestication of the duck is doubtless of very ancient origin, dating back many centuries B. C. Duck breeding in Europe and Britain is of comparatively recent date though they were undoubtedly domesticated in India and China many hundred years before the dawn of the Christian era. The Pekin variety is in all probability the oldest family of domesticated ducks.

There is a good deal of evidence pointing to the fact that some varieties, particularly the Rouen, Decoy, Mallard and Call ducks are of comparatively recent origin as domesticated ducks. The fact is cited as rather convincing proof of this that flocks of common colored ducks kept by farmers on inland lakes and allowed to run at large become practically wild and the truly wild ones mingle familiarly with them.

This fact proves less difficult of comprehension when it is well understood that many flocks of common farm ducks have been built up by the introduction of young or injured wild birds, which have been captured by the farmer's boys or which have sought the shelter of the farm in the desperation born of starvation. Once used to plenty of food they were loath to leave. The readiness with which they return to the wild state and the fact that our tame ducks have often been successfully crossed with the wild ones leave little doubt in regard to the ancestry of our present day domestic duck.

The Great Duck Industry

The development of the market industry forms an interesting chapter in the history of poultry culture in America. The Pekin duck is the duck par excellence in this country. The importation of the Pekins marked an epoch in our duck industry, and much credit should be given to the enterprising importers. The Pekin duck of that day did not compare favorably with the present day Pekin and the men who have wrought this improvement in shape and weight by their earnest and skillful methods have made possible an industry which in one locality annually markets 350,000 ducklings with an expenditure of nearly \$150,000 for labor and feed. In England the White Aylesbury occupies the same position that the Pekin does on this side of the water and they are grown successfully in large numbers.

Standard Bred Ducks

The advantages of combining the breeding of standard bred ducks with utility birds is becoming more and more popular as breeders realize the opportunities for disposing of stock and eggs for breeding purposes. Single specimens having show records find a ready sale at from five to twenty-five dollars each for use as breeders. Eggs from choice matings range from three to ten dollars and even higher per sitting and most of the big market growers realize the profit to be derived from the "fancy" end of the business. The small breeder, as well, finds more enjoyment in the breeding of high class birds than in the rearing and sale of market ducks alone.

How Best to Start

To make a start buy good stock and exhibit it at your county fair or nearest winter show. Many a true fancier dates his interest in the fancy poultry business to the time when as a boy he won a prize at a small show. It is an excellent plan to give children who live where it is possible to breed ducks, an opportunity to own a flock. It will develop a wholesome love of nature and the responsibility of caring for and feeding the flock is excellent training, as is, also the insight they get into business when they come to buy and sell.

A pen of healthy ducks, a good stretch of grass land, a low cost house for shelter and the determination to succeed is all

the equipment necessary for a beginning. They can be successfully raised without running water but should have a good supply of fresh drinking water in pails or troughs convenient to feeding places at all times of the day and night, also oyster shell and grit. They need plenty of shade. To each five ducks allow one drake and mate about thirty in a pen. Later in the season one drake may be removed from each pen. Feed night and morning what they will eat of a mixture of three parts by measure, wheat bran, two parts Indian corn meal and one part each low grade flour and beef scraps (not a poor quality fertilizer). Salt this slightly and thoroughly mix, not too wet, with cold water. Do not cook the food except in winter, when it may then be mixed with hot water but never cooked. Do not feed at noon if the ducks are on a grass range; if not, feed all the green food they will eat each day—corn fodder, rye, grass, clover or any green stuff they will eat. In winter vary the fare with boiled turnips mashed and mixed with the above mixture. Give them cabbage, chopped fine, or any other green food obtainable at noon. Have regular feeding hours and when you go among them go carefully and speak to them. Ducks are very timid and easily frightened and you cannot make pets of them but they do learn to trust the person that feeds them. Avoid all unnecessary disturbance or noise and do not allow dogs or other animals to run in the buildings or yards. If one becomes frightened, an entire pen of ducks will follow and cause the loss of many pounds of flesh. It has been known to so affect them that fattening them to standard weight was almost impossible.

Freedom From Disease

Ducks are surprisingly free from disease if kept under any reasonably clean conditions. They cannot be kept in a filthy, damp house without danger of sickness in the flock, and a sick duck is almost invariably a dead one. It is a good plan to keep the drinking vessels outside the house and thus avoid having water slopped over the floor inside. Place the feed troughs near the water, as nearly every time a duck takes one mouthful of food it wants about four swallows of water to wash it down. In the indoor pens use sand or chaff for litter, allowing plenty of it and change sufficiently often to keep the quarters clean. Once every week ought to be sufficient.

Demand is Growing

But a few years ago there was small demand for ducks in any of the Eastern cities. The people did not know what a rare morsel a ten-weeks-old duckling is. Today, with the business well-established throughout the Eastern states, it but remains for men of skill and perseverance to further develop and increase the supply, and in doing this, double the already large and profitable duck industry.

Standard Varieties

The present American Standard of Perfection recognizes ten breeds of ducks divided into twelve varieties. Besides these there are five or six varieties not so popular that are bred mainly for ornamental purposes and for Zoological gardens. Of these the Mandarin, Wood ducks and the Wild Mallards are probably the most popular and best known.

Any one who undertakes to raise thoroughbred ducks must of necessity carefully study the Standard. He should commit to memory its description of the variety he breeds and impress indelibly on his mind the ideal shape and color. To insure success he should study not only the Standard description of the variety he selects, but all the others also in order that he may carefully fix in his mind the differences in form and color. This is more easily possible when one raises ducks or geese than when breeding other poultry, of which there are so many more varieties.

Among the Standard varieties of ducks the Pekins are undoubtedly the most popular, due to their wonderful utility value. The Standard weight is nine pounds for the adult drake and eight pounds for the adult duck. The young drake should weigh eight pounds and the young duck seven, which is the same as the adult Cayuga and Blue Swedish ducks, a pound more than the Crested

(Continued on Page 748.)

SOME SPECIAL POULTRY HOUSE PROBLEMS

Poultry Houses are Gradually Becoming Standardized in Type. The Poultryman, No Matter Where He May Live Will Make No Serious Mistake in Building His New House if He Adopts the General Plan Described in This Article. Some Special Directions are Given on Points that, Often are Overlooked

By Prof. H. R. LEWIS, of the New Jersey Experiment Station, and HOMER W. JACKSON

THERE is a growing tendency toward uniformity in poultry house construction and this tendency certainly should be encouraged. There is no reason why the poultryman should not profit by the experience of others in this respect, as he usually is glad to do in other lines of work. Certainly the general tendency to "express one's individuality" in the details of poultry house construction is one that ought to be kept rigidly under control.

It is the experience of poultrymen the country over that originality in poultry house architecture is uniformly and thoroughly disappointing. The cheapest, most practical and most satisfactory poultry house conforms closely under practically all conditions to a fairly uniform type. Such a house is of good width, provides ample ventilation by means of a curtain front and has a shed-roof, or, under some conditions, a combination roof or one of uneven span. The pens are large enough to accommodate at least one hundred hens, where fowls are kept in large numbers and, as a rule, a concrete floor is provided.

It is noticeable, however, that under some conditions (especially with beginners) various types of poultry house construction that differ widely from those favored by practical men are more or less popular, and sometimes receive enthusiastic, if short-lived, endorsement. The reason for this appears to be a lack of familiarity with other types. It is natural that a poultryman whose experience has been limited to houses of a single type should be fairly well satisfied with them, particularly if he has in a measure designed them himself. But where there is an opportunity closely to compare different types, novel forms of construction quickly lose in popularity and are replaced by houses that conform closely to the simple, unpretentious, shed-roof design. Experiment stations that have carried out close comparisons between the conditions existing in houses of different types have done much to eliminate undesirable designs.

We know no place where this work has been carried out more thoroughly, nor where more definite results have been secured, than at the New Jersey Station. For a number of years Professor Lewis has been comparing houses of different types, at all seasons of the year, and carefully tabulating the results of his observations. We do not recall having seen any detailed statement regarding his experiments since the Annual Report of the New Jersey Station for 1913, in which very definite statements were made in regard to the merits and demerits of various types of houses under comparison.

Wishing to learn whether later results had confirmed the conclusions of Professor Lewis, as stated in the Annual Reports for 1912 and 1913, we recently addressed a list of questions to him. Professor Lewis has kindly answered these questions quite fully and in a most interesting manner, as follows:

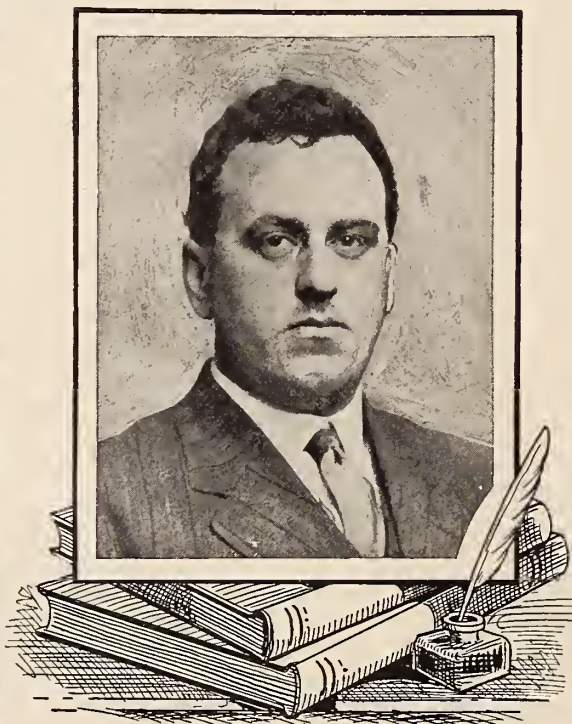
Question 1. What type of laying house have you found most practical under New Jersey conditions?

Under our conditions we have found the house which we call the New Jersey Multiple Unit most satisfactory for commercial flocks. In this house the width is twenty feet and with pens twenty feet long, which is the size regularly provided in this house, we have a square room with four hundred feet of floor space, giving a capacity of one hundred hens, or one hundred and twenty-five when Leghorns are kept.

There are a number of reasons why we prefer a depth of twenty feet. The nearer the depth of the house corresponds to the length, the cheaper it is to build, other things being equal. The present tendency is toward large flocks, which commercial growers have found necessary in order to economize in labor cost and for this purpose houses twenty feet deep have proved to be more satisfactory in practical experience, than narrower ones.

One important reason for building twenty feet deep is that by so doing the hens, when on the perches, will be so far back from the front that it is possible to provide large openings, thus admitting an abundance of fresh air and light without exposing the hens to violent air currents or drafts. In many instances, we have found outbreaks of roup to be due to narrow houses in which the fowls necessarily perch near the open front, so that in windy weather they are more or less exposed to strong currents of air. No practical means has yet been found for making open-front houses free from air currents when the wind is blowing, but the birds must be shielded from them if they are to be kept in good health. This is especially important when they are on the perches at night. As open-front houses ordinarily are constructed, the fowls suffer little inconvenience from air currents when on the floor.

The accompanying blue print plans will show the construction of the New Jersey Multiple Unit House which has been found to give complete satisfaction, not only at the Station but throughout the State. Hundreds of these houses have been built within the last few years and the best of results have been reported. Note that in these houses the windows, instead of sliding up and down, are hinged at the side to open in-



Prof. H. R. LEWIS

Head of Poultry Department, New Jersey Experiment Station.

Professor Lewis is the author of the accompanying article on poultry house construction. He is especially well qualified to write on this subject. At the New Jersey Station he has carried on a series of elaborate experiments for several years, in which he has compared poultry houses of different types. As a result of these experiments he has worked out the details of the "New Jersey Multiple-Unit Laying House", which has been quite generally adopted by practical poultry keepers throughout the state.



ward and can readily be swung back out of the way, thus providing additional ventilation whenever weather conditions make it desirable to do so.

An ordinary shed-roof is used as we have found it generally more satisfactory and cheaper and easier to build than any other form. Where this house is in use with flocks of several hundred birds it is customary for commercial poultrymen to allow the birds to run in one flock, building a partition out from the rear wall at intervals of twenty to forty feet and carrying this partition forward several feet beyond the perches but leaving an open space near the front so that the birds in each forty-foot space have access to all parts of the house, but are protected from drafts by these partitions.

Special attention is called to the provision for ventilation in the rear of the house by ceiling the walls back of the roosts and overhead and letting the air circulate between the studding and rafters and under the droppings platform. A narrow door under the eaves, running the length of the building, can be opened in hot weather, and where this is done the back part of the house will be found much cooler. A house of this type can be built, 20 x 40 feet, with a capacity of two hundred hens, at a cost of about \$225.00 for material and labor, using first class material throughout. Where cheap labor is available, and where the poultryman is able to do the major part of the construction work himself, the cost can be greatly reduced. In this estimate of cost it is assumed that a concrete floor will be provided. The use of a dirt floor would still further reduce the cost.

Question 2. How should the area of glass windows and muslin-covered windows be proportioned to floor space?

We like a house which has a relatively large amount of open front. The climate of New Jersey is comparatively mild, winters are short and the air carries a higher degree of humidity than is generally found in the interior of the country, and for this reason ample ventilation is required; while in the summer time large openings are necessary in order to make the house comfortably cool. Under our conditions, therefore, we find it desirable to provide one square foot of muslin to ten square feet of floor space, and one square foot of glass to twenty square feet of floor space. In other words, to provide for twice as much muslin as glass.

Question 3. In your climate, do open-front houses without muslin protection give satisfactory results?

We prefer to have all open-fronts protected by muslin cur-

tains. We make comparatively little use of them, but in stormy weather we find that muslin curtains enable us to keep out the rain and snow, making the house much drier. In the case of extreme cold or heavy winds, sufficient ventilation is secured with the curtains closed and they unquestionably add to the comfort of the hens. We rarely close these muslin curtains during clear weather, however, unless the cold is extreme.

Question 4. Have you tested the Cornell Wind Baffler and if so, with what results?

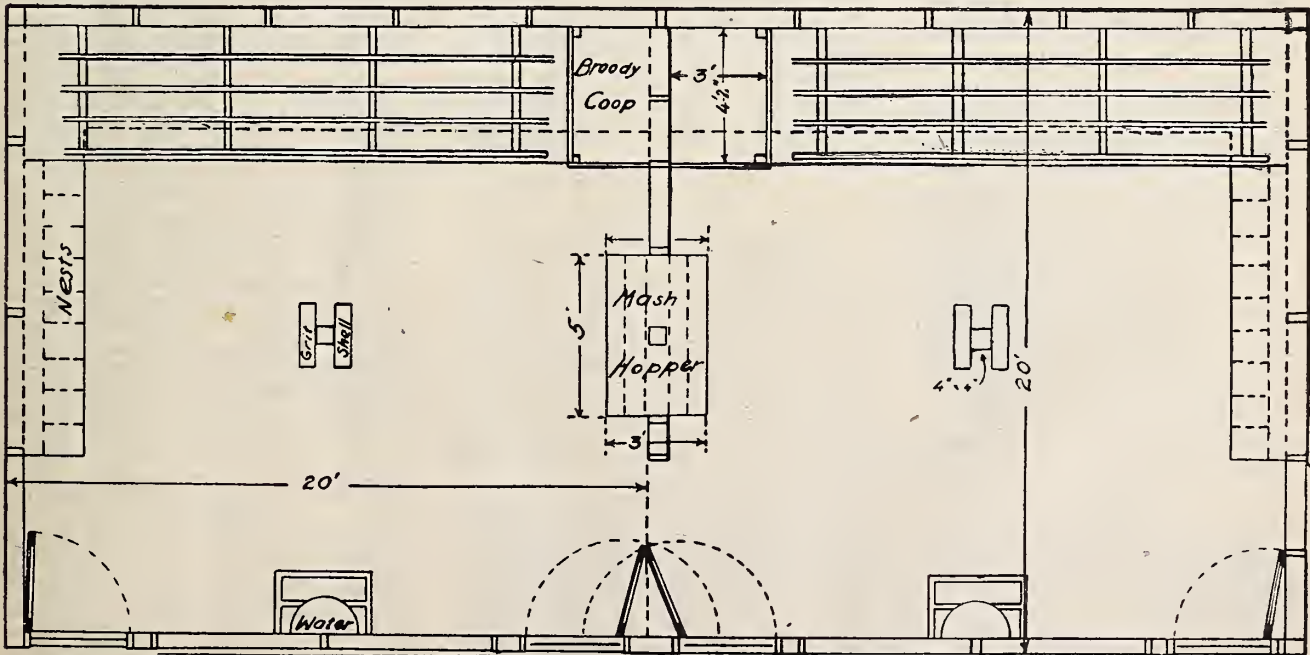
For a number of years, we have been trying out shutter ventilation of different types in the place of curtains, and have reached the general decision that such ventilators are not satisfactory for us, for the simple reason that their use restricts the amount of sunlight that can be admitted to the house. We have never tested the Cornell Wind Baffler because, even though it should prove entirely satisfactory in preventing drafts and in keeping out rain and snow, we still would find it objectionable on account of the fact that no sunlight can enter through it.

We believe that the admission of ample sunlight is one of the three essentials in creating a comfortable, sanitary poultry house—dryness and ventilation being the other two. A ventilating shutter, therefore, no matter how efficient it might be in keeping out the wind and snow, would still be objectionable on account of its obstructing the sunlight.

Question 5. Have you tested the semi-monitor or so-called "Woods" house, and with what result?

We have tested the semi-monitor type of house on our plant for four years, running it in comparison with various other types of poultry house construction and have closely observed the conditions that exist in these houses at all seasons of the year. As the result of the most careful tests that we were able to give, we have found the semi-monitor type of house unsatisfactory and we do not recommend it for the following reasons:

1. It is a very cold house. The warm air rising in the back part comes in contact with the air in the peak and cools off rapidly, falling and thus setting up a rapid circulation of the air which creates drafts and yet on account of the failure of the air to renew itself, does not bring a sufficient amount of fresh air to the birds on the perches.
2. While the semi-monitor house admits sunlight in the rear, it does not reach the right (Continued on Page 737.)



FLOOR PLAN OF THE NEW JERSEY LAYING HOUSE

This floor plan should be studied in connection with the accompanying article by Professor Lewis, entitled "Some Special Poultry House Problems". It provides for two twenty-foot pens, accommodating two hundred hens, and can be built at a cost of \$225.00 or less where low-cost materials are obtainable.

AMERICAN POULTRY WORLD



DEVOTED TO THE
Upbuilding of the Poultry Industry
in All Branches

GRANT M. CURTIS, Editor
WM. C. DENNY, Associate Editor
ARTHUR O. SCHILLING, Artist

CONTRIBUTORS: The best informed and most
reliable men and women at work today in the
broad field of Poultry Culture and advancement

EDITORIALS

MR. CURTIS WILL NOT BE ABLE TO ATTEND THE CLEVELAND CONVENTION

July 1st, Mr. Curtis accompanied his family to Conesus Lake, N. Y., for a few days needed rest. July 3rd he was caught in a sudden storm and the exposure resulted in a severe attack of inflammatory rheumatism, which has kept him confined to bed, helpless to assist himself or to conduct business. Today, July 26th, the attending physician said it probably will be two weeks before Mr. Curtis is able to sit up and another week before he can return to his home in Buffalo. Therefore it will be quite out of the question for him to be present at the forty-first annual convention of the American Poultry Association at Cleveland, Ohio, August 7-11. Even if he were to make unexpectedly rapid progress, his physician says it would be very unwise to undertake the trip and run the risk of a relapse. This is perhaps the keenest disappointment that Mr. Curtis has ever had to bear in connection with his more than twenty years of continuous work for the poultry industry.

Before Mr. Curtis left Buffalo for Conesus Lake he had practically completed the work assigned to him at the A. P. A. convention at San Francisco last November, so far as it could be done up to the time of the meeting of the Standing Committee on Standards that

was scheduled to meet at Cleveland, August 4th and 5th. Probably the meeting will be held and the work will go right on. Such is his hope.

As soon as it could be arranged the Breed Standard Committee met in Buffalo and carefully outlined the work, which was then placed in the capable hands of Mr. Homer W. Jackson as editor; also in those of J. H. Drevenstedt in a similar capacity as relating to the Wyandotte breed book. Much hard and effective work has already been done and great progress has been made. Messrs. Jackson, Sewell and Schilling have done especially good work and a lot of it, as the members of the association will learn when these matters come before the convention at Cleveland. The members of this committee, E. E. Richards, A. C. Smith, W. R. Graham and W. S. Russell and other well-known members and judges have lent their assistance.

The association may be said to have taken on new life at the Cincinnati meeting, 1905-1906, and the editor of A. P. W. wished to do everything in his power to make this meeting, held ten years later, the greatest event of the poultry industry of North America. Flat on his back and unable to raise his head or hands, he bids me say he believes it will work out that way. Mr. Curtis has expected and he still believes that this will be the largest and most representative gathering of American poultrymen held thus far in the United States and Canada, and he looked forward with keenest interest to being present and doing what he could to help along matters that are important to poultry culture. He had expected to have the pleasure of renewing old acquaintances and making a lot of new friends in this field. This measures the depth and width of his personal disappointment.

MRS. G. M. CURTIS.

THE CLEVELAND CONVENTION

The interest of American poultrymen will be especially centered in the 41st Annual Convention of the American Poultry Association to be held in Cleveland the week of August 7th. Indications are that it will be a well attended meeting, especially as regards the attendance from the Central-West. It is to be hoped that those in attendance will decide wisely on matters coming before the convention in order that the association may continue to make progress and the Standard Poultry Industry be benefited thereby. Matters of unusual importance will be brought up including the plans for completing the Breed Standards, the Market Poultry and Egg Standard, important amendments to the Show Rules, the report of the Committee on Poultry Huckstering, etc.

There will be special meetings for poultry judges, for poultry show and specialty club secretaries, of dealers of hatching and day old chicks, for poultry publishers and editors. A full programme of the meeting was published on page 688 of July A. P. W. A complete report will be published in the September issue.

CONFIDENCE

Confidence is a great asset. It is in fact a necessity in conducting any successful business. If the buying public does not have faith in the individual or firm that is bidding for trade, that firm or individual will not succeed.

Confidence is particularly essential in conducting the Standard poultry business where the purchaser has to place so much faith in the person or firm with whom he is dealing. Confidence can only be created and a permanent business built up through a business policy of fair dealing, of giving value received,—and a little more, in every instance. It is a business policy of this kind that has developed an annual trade amounting to thousands of dollars for such breeders as E. B. Thompson, D. W. Young, Lester Tompkins, U. R. Fishel, M. F. Delano, H. W. Halbach, John S. Martin and other nationally known poultrymen. Buyers throughout the United States and Canada, in fact of all the civilized countries of the globe show their confidence in these breeders and other American poultrymen by sending remittances that range from a few dollars for ordinary breeders to thousands for an exhibition string,—and be it to the credit of most breeders, they make every effort to have these customers satisfied.

An eloquent mark of the esteem and the confidence in which John S. Martin, Box W, Port Dover, Ont., White Wyandotte specialist is held by one of his customers was shown recently by this customer sending him a description of his requirements together with a signed blank check with the request that Mr. Martin fill in the check for the sum that he deemed it necessary to charge for the stock that the purchaser wanted.

A. P. W. is pleased to endorse Mr. Martin and his business dealings in every sense of the word. Mr. Martin was the first breeder to sign an advertising contract with A. P. W. when it started seven years ago, and since that time his advertisement has appeared in every issue. During this time when his sales have totaled many thousands of dollars we have never had a complaint of any kind or description from any of Mr. Martin's customers. He bases his business success on trying to give each customer just a little more than he pays for, and the rapid development of his business is ample proof that this policy pays.

AS F. M. PRESCOTT VIEWS DOUBLE MATING

On a number of occasions A. P. W. readers have heard from F. M. Prescott, Riverdale, N. J., on various matters of interest and importance. As proprietor of Riverdale Poultry Farm, Mr. Prescott has had wide experience in breeding and exhibiting different Standard breeds and varieties. This experience

together with his possessing a fertile mind has resulted in Mr. Prescott having decided opinions that differ considerably with other successful poultrymen, as regards a number of matters of importance relating to Standard ideals and methods of conducting business. While we ourselves are not willing to subscribe to all of his ideas, we consider him a staunch supporter of the Standard-bred poultry business and are willing to credit him with being sincere in advocating his opinions for the best interests for the poultry industry.

Mr. Prescott does not believe in double mating for Barred Plymouth Rocks, Silver Penciled Wyandottes, Brown Leghorns or any other breed that requires this system of mating to produce exhibition specimens. He considers the description of ideals that makes such practice a necessity as being against the best interests of the poultry industry, and accordingly blames the American Poultry Association as the organization that has controlled the standard for making awards at poultry exhibitions.

It is Mr. Prescott's opinion that every breed in the Standard should be so described that the color description will describe the different varieties as they are mated and bred, in order that all of the birds produced may be exhibited with a reasonable chance of winning prizes. He believes it very detrimental to the business and unfair to the amateur, who not being acquainted with the principals of breeding poultry, mates exhibition specimens with the result that the offspring is not what he expects. Mr. Prescott has urged President E. E. Richards to present a resolution at the 41st Annual Convention to provide ways and means that the 1923 Standard describe the ideal male and female of every breed as regards color exactly as it is bred.

As already stated, we do not agree with all of the ideas advanced by Mr. Prescott and this is one of them. Half the interest and fun of breeding Standard poultry will be taken away the moment the Standard describes ideals that are easy to produce. There has been a wonderful improvement in the average quality of varieties of poultry during the last ten years. Varieties are becoming so well established that the percentage of breeding and exhibition specimens is constantly increasing, and it is the desire to produce the exceptional that spurs on many an effort in the industry. Experience is a great teacher and that is what many people who take up the breeding of Standard poultry are looking for.

The present Standards for color in Barred Plymouth Rocks, Silver Penciled Wyandottes, Brown Leghorns and other varieties that require double matings describe a more beautiful fowl than the female would be providing Mr. Prescott's ideas prevailed. There is no reason why the ideal Brown Leghorn female for instance should not be beautiful instead of shafty and coarsely stippled as well as being darker in color, as would be the case if we described a handsome male and expected to mate him with a female that would produce his like or approximately so.

The American Poultry Association has already undertaken to remedy some of the causes that Mr. Prescott complains

WHAT SORT OF AN ATTEMPT MIGHT THIS PROVE TO BE?

The following letter and resolution have been received by us:

"Stewartsville, Ind., July 12, 1916.

"Editor American Poultry World:—

"In my capacity as Secretary of the Indiana State Poultry Association, I am sending you herewith a copy of a resolution passed by them at their annual meeting held at the farm of Mr. Martz at Arcadia, Ind., on June 22nd, 1916.

"Very truly yours,

"L. J. DEMBERGER, Sec'y.,

"Indiana State Poultry Association."

Resolution

"WHEREAS, the widespread and continued publicity given to cases of alleged misconduct of a few prominent poultrymen has created a distrust in the minds of many would-be purchasers of Standard-bred poultry and eggs for hatching.

"WHEREAS, there seems to be a desire on the part of some editors to try said cases in the public press without admitting or submitting evidence from the party or parties accused;

"WHEREAS, said publicity and one-sided evidence is calculated to injure the reputation and business of all breeders;

"WHEREAS, much of the valuable time of the American Poultry Association at the annual meet and to its detriment is absorbed by discussion of grievances between members that should be settled in the courts;

"WHEREAS, all such personal fights act as a direct injury to the honor and integrity of the American Poultry Association and the breeders of pure-bred poultry;

"THEREFORE, BE IT RESOLVED, that we earnestly request said editors to discontinue the publication of said articles until the courts have ruled on the evidence and a verdict is rendered;

"BE IT FURTHER RESOLVED, that we hereby petition all editors who deem it to be for the best interests of Standard-bred poultry to discontinue the advertising of any individual, firm, or corporation, that said editor set forth the reason for such refusal, make plain his objections and let one announcement in his journal close the case,

"BE IT FURTHER RESOLVED, that we unqualifiedly condemn the practice of cartooning or holding up to ridicule men in public life who honestly defend their positions and have the courage of their convictions;

"BE IT FURTHER RESOLVED, that a copy of this resolution be forwarded to the editors of all poultry journals, with the request that it be published at an early date.

"INDIANA STATE POULTRY ASSOCIATION."

"June 22, 1916."

of. The new breed books that are under way will not only benefit the novice and amateur, but the experienced poultry breeders also will receive great assistance if he will take the trouble to read and study the valuable matter in the form of reading matter and illustrations that are being published. We have been privileged in seeing some of the work that has already been done and feel free to say that nothing so helpful, nothing that will benefit poultrymen, be he beginner or experienced has been collected, as the matter that has already been gathered for the Wyandotte Breed Book.

Not only is it planned to have these breed Standards describe and tell how to mate, but a wonderful collection of feathers, in addition to illustrations of the best living specimens that have been produced have been gathered as object lessons for this work. With the publication of books of this kind, the A. P. A. relieves itself of the responsibility, part of it at least for having established Standards for males and females, the mating together of which would not produce specimens as good, or approximately so as the parent stock.

The American Poultry Association is not to be censured for lack of knowledge

in regard to double matings and what is required to produce high class exhibition specimens in varieties like Barred Rocks, Brown Leghorns, Silver Laced Wyandottes, Partridge varieties, etc. The exhibitors and breeders themselves have been just as backward in giving this in-

PHILLIP'S PARTRIDGE ROCKS

Summer sale of breeders now on. Booking orders for the early shows.

JAS. F. PHILLIPS,

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Buffalo, N. Y.

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"Slades" Imperial Pekin and Fawn and White Indian Runner Ducks

Leading Winners, champion layers. Mating list with certified record of "Victoria", World's champion layer

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Chicago Winners

Selected and bred for superior egg production as well as for exhibition qualities. Eggs from pedigreed matings \$5.00 per 15, \$9.00 per 30. 8 strong healthy chicks guaranteed from each setting.

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BLUE RIBBON WINNERS NEW YORK, BOSTON, ETC.

Good breeding males \$3 up. Females \$1.50 up. Send for sales list covering high class exhibition and breeding birds offered at greatly reduced prices. **TURTLE POINT FARM, Saratoga Springs, N.Y.**



HALBACH'S WHITE PLYMOUTH ROCKS

WINNERS—INVINCIBLE—LEADERS

Sale extraordinary! Get your copy of my great half-price sale list. Never, anywhere, has any breeder offered such astonishing outstanding bargains. Your opportunity!

H. W. HALBACH,

Box 3, Dept. E,

WATERFORD WISC.



formation. They have told little if anything about how to mate and why. As a result there have been many disappointments when high priced specimens have been mated together by those lacking in experience.

Recently it did us a wonderful amount of good to pick up a handsome twelve page folder sent out by O. B. Andrews, Chattanooga, Tenn. Mr. Andrews is a Barred Plymouth Rock Specialist having originated Premier-Efficiency strain with which he has won at prominent shows through the country. In his circular Mr. Andrews has the following to say on the subject of double mating:

"Practically all of the world's greatest Barred Rocks are double mated. This term to the beginner is sometimes confusing, so I will briefly explain. The 'Standard of Perfection,' by which all shows are judged, states that the male and female must be the same color. In breeding Barred Rocks, the males have a tendency to breed light and the females too dark. They are sometimes called light and dark Barred Rocks.

"To offset this, we breed a standard (or exhibition colored male) to a very dark female—the color of his dark female in feathers is, the black barring is twice as wide as the light, or approximately so. The offspring from this mating in males will be exhibition color, while the females will be too dark for exhibiting, but can be used for breeding exhibition males. These females are called cockerel-bred females—the males, exhibition males.

"In breeding exhibition females, we take an exhibition colored (or standard colored female) and breed to a very light male—the barring of the feathers in the male being approximately the white barring twice as wide as the black. The offspring of this mating in females are called Standard or Exhibition females, while the males are called pullet bred males.

"Thus you see we have a cockerel mating for producing exhibition males and pullet mating for breeding exhibition pullets. You also observe in Barred Rocks we do not breed exhibition male to exhibition females, but on the contrary breed an exhibition male to a dark (cockerel bred) female and the exhibition female to a pullet bred (or light male).

"To further make the matter plain, as I always desire to give the beginner the benefit of my knowledge, I will give you the correct terms:

"What is an exhibition male? Ans.: An exhibition male is a standard colored or prize winning male, produced from an exhibition male bred to a cockerel female.

"What is a cockerel bred female? Ans.: A cockerel female is a female used in breeding to an exhibition male; she is known as a dark female and is too dark for show purposes.

"What is an exhibition female? Ans.: An exhibition female is a standard colored or prize winning female, produced from mating an exhibition female to a light or pullet bred male.

"What is a pullet bred male? Ans.: A pullet bred male is a male used in breeding with an exhibition female to produce exhibition female. He is too light for exhibition purposes but must be used in what is known as pullet breeding pens.

"The above makes it very plain to the beginner. When ordering stock always specify whether you want a pen for exhibition males (or cockerel breeding pen). On the other hand, if you want a pen for breeding exhibition females (or a pullet breeding pen), be sure to so state.

"In ordering male birds specify whether you want an exhibition male or a male for breeding show pullets.

"In ordering females be sure to state whether you desire an exhibition female or whether you want a cockerel bred or (dark female) with which to produce exhibition males.

"In furnishing eggs, unless otherwise specified, I furnish half from my exhibition cockerel breeding pens and half from my exhibition pullet breeding pens.

"This method of breeding should not mitigate against Barred Rocks because in most show birds of many varieties, the skillful fancier has one method of producing fine females and another to produce winning males."

If breeders of all varieties were equally frank and as willing to help their customers as Mr. Andrews tries to help his, the measure of disappointment that comes as a result of mating an exhibition Barred Rock male and an exhibition Barred Rock female would be exceedingly small. It is this kind of advertising matter and the new breed books that will do much to help the poultry business.

THIS MONTH'S COVER

This month's cover illustration presents a study by Artist Schilling of a pair of high class exhibition Black Tailed Japanese Bantams, the product of a most successful strain of this variety. They were bred by Mr. Geo. Urban, Jr., Pine Ridge, Buffalo, N. Y., who has met with unusual success in the pursuit of one of his hobbies, breeding Bantams.

The Japanese breed is one of the oldest members of the Bantam family. They are bred in a number of colors, Whites, Blacks, Greys and Buffs, in addition to the Black Tailed White variety, the last named being by long odds the most popular. Japanese Bantams are very short in leg and thigh, the shorter the better as their bodies should only just clear the ground. The wings are long and droop, in fact on many of the best specimens they actually touch the ground. The tail is carried upright and rather forward so that it almost touches the head.

The Bantam fancy is having a gradual but healthy growth in America, especially in the eastern states and Canada. They are extensively bred by business and professional men as well as boys and girls. The first named classes engaged in the production of Bantams as a matter of recreation from business and professional cares, whilst the boys and girls are attracted and keep them as pets.

The Bantam interests of the country are fostered by the National Bantam Association, a specialty club organized a quarter of a century ago. This club will hold its 25th Anniversary Meeting and Club Show at the coming Madison Square Garden Poultry Exhibition. According to reports from Secretary Geo. L. Young, it will be the greatest event of its kind that has yet been held. The officers of the club invite and request not only the attendance of all who are interested in Bantams but urge them to

make exhibits as well. It is the desire to bring out the largest meeting of persons interested in Bantams and the largest exhibit of the dwarfs of the feathered race ever brought together.

***A dime pays for a four months trial subscription to A. P. W. Why not send it to a friend?

Leon C. Bennett Breeder of
BLUE ANDALUSIANS and S. C. REDS
A few cocks and cockerels of each variety for sale at reasonable prices.

LEON C. BENNETT, EUCLID, N. Y.

Unnecessary to Change Your Formula

If you have worked out a ration formula that is bringing you excellent results in strong, healthy birds and plenty of eggs during all seasons, it will not be necessary for you to change your formula in order to obtain still more satisfactory results.

FRENCH'S POULTRY MUSTARD

is a tonic or conditioner that is added in small quantities to any ration. It is inexpensive because it is added in such small quantities. One of the world's most prominent poultrymen who used a formula that had produced very satisfactory results for him was persuaded to add Poultry Mustard to that ration and the result was that six pullets fed with the Mustard addition laid 13½ dozen more eggs from October to April than did six pullets of the same hatching which were fed only the regular ration.

The details of this experiment and a few words from prominent American poultrymen who are using French's Poultry Mustard successfully, are to be found in a 32 page booklet which will be sent on request.

THE R. T. FRENCH COMPANY

Dept. B, Rochester, N. Y.

MOTTLED-JAVAS-BLACK

EGGS AND BABY CHICKS FOR SALE FROM 1916 WINNERS AT MADISON SQUARE GARDEN AND BOSTON.

SETH W. MORTON

BOX 124,

ALBANY N. Y.

Keller's Wyandottes

SILVER, GOLDEN AND WHITES. Line bred for 31 years. One of the oldest strains in America. Winners of thousands of premiums at Madison Square Garden, Buffalo, Chicago, St. Louis, Cleveland, Cincinnati and Columbus, during the past 29 years. They have the size, shape, color and narrow lacing that puts the Keller stamp on them. Choice stock to spare that are real bargains. If you wish to raise fine show stock and high class stock birds that are heavy layers try us. Eggs from the finest matings \$3.00 and \$5.00 per setting, also the finest Golden Sebright Bantams. Large circular.

IRA C. KELLER, Expert Judge,

Brookside Stock Farms,

Box 25,

PROSPECT, OHIO

BYER'S ORPINGTONS

BUFFS, BLACKS AND WHITES

You can ill afford to ignore my ability to now serve you liberally in the finest exhibition birds, or the best possible layers in utility stock.

C. S. BYERS - (Orpington Specialist 18 Years) HAZELRIGG, IND.

AN IMPORTANT SALE

Announcement of the fact that B. H. Seranton, Rising Sun, Ind., S. C. Rhode Island Red specialist has disposed of his stock, business and good will, will no doubt surprise many, especially those who are well acquainted with Mr. Seranton and knew of the rapid development of his business interests in breeding, exhibiting and selling high class S. C. Reds.

Mr. Seranton has disposed of his business to Rau and Fry of Indianapolis, Ind. Fred Rau of this firm has been a successful breeder and exhibitor of Blue Orpingtons while Will F. Fry is widely known to poultrymen through his connection as Associate Editor of Reliable Poultry Journal. Mr. Fry has resigned his position with the R. P. J. and in the future will join Mr. Rau and give his time and efforts to producing S. C. Reds and Blue Orpingtons.

The Seranton Strain of S. C. Reds is one of the oldest and most successful in the country. They have won for Mr. Seranton and his customers north, south, east and west. Last winter Mr. Seranton for the first time made entries at Madison Square Garden and in the strongest class ever brought together won first pen and first cockerel. Regarding the purchase Mr. Fry writes: "We have bought out Ben Seranton 'lock, stock and barrel.' He agrees to stay out of S. C. Reds for three years. The flock is in fine shape and we get all of his birds. Of course it cost a good round sum, but I believe we get the best in the Midwest, as well as a business that is growing rapidly."

While A. P. W. regrets that Mr. Seranton is leaving the Standard poultry business for the time being, we are pleased that his business has been transferred to such good hands. Here's wishing success to Rau & Fry.

A GOOD PLAN FOR POULTRY ASSOCIATIONS TO FOLLOW.

The extension department of the Rhode Island State College at Kingston, R. I., has taken up the work of interesting young people in Standard-bred poultry culture. They have obtained the co-operation of the Rhode Island Poultry Association who at their annual coming show to be held in Providence, December 5-9, 1916 will provide a department devoted exclusively to the displays of boys and girls under eighteen years of age. The following announcement of plans already adopted is being sent out:

"The forthcoming premium list of the Rhode Island Poultry Association will contain a new feature of special interest to boys and girls. A Juvenile Department will be held in connection with their next (31st) Annual exhibition in Infirmary Hall, Providence, R. I., December 5th to 9th, 1916.

"The new department will be devoted exclusively to exhibits from young people under eighteen years of age where they can show their poultry and eggs, competing only among themselves for ribbons and special prizes.

"The Association has very generously voted to charge no entry fee in this department other than a coop fee of 25c for each bird entered. This amount, however, will be returned when the specimens are shown as entered.

"The Extension Department of the Rhode Island State College at Kingston has taken up this work and is doing what it can to help and encourage these youthful exhibitors.

"Special prizes such as breeding birds, eggs for hatching, poultry supplies, remedies, books, periodicals, cash or anything useful for boys and girls, are now being solicited,

and a liberal response is expected from those interested in this important branch of agriculture."

While a Juvenile Department at a poultry exhibition is not an altogether new idea, it is seldom that so prominent an association has taken it up to the same extent as the Rhode Island Poultry Association proposes to do,—and because of the promised co-operation from the Extension Department of the State College, it should meet with success. We believe the plan is worthy of more than passing attention and one that is well worth being developed. Much good will be accomplished if the boys and girls of the coming generation master the principles of successful poultry keeping and learn first-hand the advantages of keeping standard poultry. In no other way can they obtain this information so well as from actual experience with the different phases of the industry.

We hope that other poultry associations, as well as the fall fairs will follow the announcement of the Rhode Island Poultry Association by making arrangements for a Juvenile Department to be held in connection with the coming season's shows. A. P. W. will lend every possible support in making the adoption of such plans a success.

STANDARD POULTRY IS HERE TO STAY, SO SAYS I. K. FELCH

Those poultrymen who have never had the pleasure of corresponding with I. K. Felch, Natick, Mass., have missed something. Mr. Felch is in his 85th year and apparently his mind is as keen and active as it was when we formed his acquaintance more than twenty years ago. After having devoted a lifetime to the upbuilding of the poultry industry, Mr. Felch is now as enthusiastic and as hopeful over the future for Standard poultry as he was in the "days gone by" when poultrymen hesitated to mention their calling, and when those who would pay \$2.00 for a setting of eggs or \$5.00 for a pair of any Standard variety, were thought foolish. We believe that A. P. W. readers will find much of interest and encouragement in the following, taken from a recent letter in which Mr. Felch emphasizes that the thorough-bred poultry industry is here to stay. We hope that any readers whose experience during the past season or two has not been what they had hoped for, will find encouragement in "Uncle Isaac's" statement that "behind the cloud, the sun still shines" and that they will, with renewed courage tackle the problems before them, and accomplish their undertakings.

"Natick, Mass., July 6, 1916.

"Editor American Poultry World:—

"The thoroughbred calling in poultry culture will never be abandoned. Utility breeding becomes secondary. How many people write the first time that you hear from them,

that they do not want show birds but good utility stock? How long before you get a call from them a second time, when they invariably ask for just as good as you can send them? This brings to mind a patron I once had. He first bought a trio of Brahmas for \$12.00. In just three weeks he came back saying he had sold them and bought a trio for \$18.00. In a month he came back saying he was now ready to buy a pen of Brahmas, I then sold him four birds for \$56.00.

"The next December he sent for me to come and see him, asking me how he should sell his chickens. I looked them over and told him, 'You have got to advertise and let people know you have as fine a lot of Brahmas as grow, or I will sell them for you and give you half of the money I get for them.' He thought the matter over about ten minutes when he said, YOU SELL THEM. I sold the chickens for \$822.00 and sent him \$411.00 and left 22 birds on the pen."

"Now that patron was like nine-tenths of the beginners who commence with cheap chickens before their eyes are opened to the fact that the best is always the cheapest in the end. This class of buyers has driven the breeder of Standard fowls to consider 40 per cent. of his yearly product as utility stock and sell such specimens as utility fowls to these buyers for kitchen use, because they have found out that this Standard-bred utility stock is far more productive than the ordinary farm products sold under the utility head.

"So long as people are progressing they will not be satisfied until they reach the top.

S. C. W. LEGHORNS AND S. C. R. I. REDS
A Few Barron Leghorns
Our bargain sale of breeders is now on. Cocks, hens, pullets and cockerels.

EAGLE BAY FARM, F. A. House, Supt., Silver Creek, N. Y.

HARTER'S IMPERIAL GOLDEN BUFF ROCKS

Bargains in breeders. Booking orders now for exhibition stock for fall shows.

NESCOPECK POULTRY FARM,
S. H. HARTER, Prop. Box W. NESCOPECK, PA.

The Hill Colony and Magic Brooders

are absolutely the best on the market.
For particulars address

UNITED BROODER CO., TRENTON, N. J.

DR. HESS INSTANT LOUSE KILLER

Kills lice on poultry and all farm stock. Dust the hens and sprinkle it in the nests and in the dust bath every other week—the hens will do the rest. Comes in handy sifting pot cans. 1 lb. 25 cents, 3 lbs. 60 cents (except in Canada and the far west). I guarantee it.

DR. HESS & CLARK, ASHLAND, OHIO

PERRY'S R. C. WHITE LEGHORNS, BUFF ROCKS AND BLACK WYANDOTTES

Grand males also pairs and pens mated for result at low prices. 14 years in business and reasons able satisfaction guaranteed.

LOUIS H. PERRY, Route No. 7, CLAY, N. Y.

HERING'S

S. G. W. Leghorns Silver Campines

Coliseum, Chicago, 1915, Sweepstake Champions

Unsurpassed as layers. Four thousand head of young stock and fifteen hundred matured fowls to select from. Write me today.

F. E. HERING, SOUTH BEND, IND.



**America's
Pioneer
Dog Remedies**

**BOOK ON
DOG DISEASES
And How to Feed**

Mailed free to any address by the Author

H. CLAY GLOVER CO., Inc.
118 West 31st Street, New York



**America's Oldest and Greatest Laying Strain is
Parks' Bred-To-and-Do-Lay Barred Plymouth Rocks**

They showed what over 26 years of careful selection, trapnesting and pedigreeing for eggs will do by winning in the last four Missouri Laying Contests. Made the best winter month record (when laying pays) by laying 134 eggs in January. They stand second in the present contest only five eggs back of leaders. They out-layed all the other breed entered in last Missouri contest. Making better record than the famous English strains did in either Missouri or Storrs Contests. They lead all Rocks in last North American Contest.

Special Summer Prices on Early Hatched Pullets and Cockerels
12 page surplus stock circular. Free 40 page circular a dime.

J. W. PARKS, Box W, ALTOONA, PA.

There is not a breeder living but will buy when he sees something better than he has at home. He will sell a half dozen to buy one that can build his flock. So long as that spirit controls man, so long will the thoroughbred trade in poultry stand a long way above the utility trade. Is it not a fact that it is harder to sell the poorest 40 per cent. of your product in Brahmas at \$2.50 to \$3.50 than to sell the 60 per cent. that scores 90 to 95 per cent. at \$5.00 to \$10.00 for females than \$5.00 to \$15.00 for males, with fancy show males at \$15.00 to \$25.00. Why this demand—simply the demand for thoroughbred trade. You ask, will the thoroughbred demand die out? I answer no with a big N.

"Instead of the utility branch being detrimental to the thoroughbred trade I look for the very opposite effect. It makes a market for the modest specimens from our thoroughbred flocks and opens a market for what the professional show man will not buy. At the same time it educates the man not to buy cheap birds but to appreciate the better specimens he sees at our exhibitions. As long as we have a live poultry press and first class poultry exhibitions what folly to believe that thoroughbred poultry culture will die out. I think I at least shall breed Brahmas for the few years I may remain with you, and I expect to sell them for \$5.00 to \$10.00 for females and \$5.00 to \$20.00 for males. Sales above \$20.00 will also be made, for so long as we have millionaires so long will exorbitant prices for the best in a hundred bring record prices, and also those of relative value bring a living price for the breeders. So long as a hen will earn 350 cents in 12 months, so long will our farmer keep a nice flock of utility fowls in New England.

"Local conditions often, for the time, dampen the spirits of the novice but old stagers like me know that 'behind the cloud the sun still shines'. The President has just called the militia to the front for two weeks. Nothing else has held the public attention and not for two weeks did I get a chicken letter until today. In all probability the whole poultry fraternity are in the same boat. This spring has been a poor one for chickens, for eggs have hatched poorly and the crop of nice chickens is fully 40 per cent. below par, and the supply will not reach the demand. Half the trade will be for yearlings this coming fall. My advice to those who are to buy is to buy early and buy the yearlings that have found their worth. The two-year-old hens mated to a yearling cock breeds the best chickens.

"We are not to have any war, so get ready to take care of the home trade, and the foreign trade which is sure to come. The war in the old country is on its last legs and the coming winter and spring in fowls will be export, not import trade."

CLYDE PROPER TO JUDGE AT ALLENTOWN

W. Theo. Wittman, Superintendent-Manager of the great Allentown Fair Poultry Show requests the publication of the following explanation for the substituting of Clyde Proper of Schoharie, N. Y., for Arthur O. Schilling, Buffalo, N. Y., as a judge of Ornamental Bantams at the coming Allentown Fair, to be held September 19-22:

"Allentown Fair Poultry Show has had to substitute Clyde Proper, Schoharie, N. Y., for Arthur O. Schilling, Buffalo, N. Y., as judge of Ornamental Bantams. This change was made necessary because of events having arisen making it impossible for Mr. Schilling to attend.

"Allentown Fair is especially proud of its list of poultry judges this year. In the interests of breeders and exhibitors they adopted the policy of never using the same judge more than two or three years in succession and this year they have a complete new list.

"Having got good men, paying them well and having the strongest sort of reasons to believe in their probity and knowledge, notice is hereby given that the management will want exhibitors to abide by and accept the decisions of the judges.

"Judging will as usual begin Tuesday at 12 o'clock noon; white fowls will be judged first and all awards will be made by Wednesday afternoon. Marked catalog for sale Thursday morning."

Mr. Proper is widely known as an experienced judge and breeder of Bantams. He is perhaps best known as a breeder

of Silver and Golden Sebrights, of which he has produced some of the best specimens in America. His appointment by Mr. Wittman will very likely prove satisfactory to Bantam exhibitors and result in large classes at Allentown.

Allentown Fair, under the guidance of Mr. Wittman, is recognized as one of the leading fall poultry exhibitions of the country. Mr. Wittman was one of the first, if not the first, manager of a fall fair to provide single bird cooping, specialty judges, marked catalogues and other features that are now recognized as necessities of the average fall fair and winter poultry show, but which at the time he introduced them were thought to be only parts of exclusive winter poultry shows in the class of New York, Boston, Chicago and other national exhibitions.

A. P. W. urges breeders of all varieties of poultry to support the fall fairs as well as the winter shows. Large entries at fall exhibitions as well as at the local shows will insure big exhibits at the national shows.

The Standard poultry business does not altogether depend on the success of poultry exhibitions, but it has been very noticeable in the past when the poultry exhibitions have well filled classes that the poultry business prospers. Every breeder is urged to exhibit at his or her local fair and winter poultry show and where practical at the nearest large fall show and winter poultry exhibition.

HERE IS A RECORD BREAKER

Writing under date of July 24th, L. D. Howell, Secretary of the New York Palace Show, states:

"Please note that entry No. 1 for the 1916 Palace Show arrived today, July 24th, 1916."

As Secretary for the Palace Show, Mr. Howell has established a number of records, but in many ways receiving an entry in July for an exhibition that will take place in December, takes the cake. Evidently the unusual spell of hot weather that has prevailed throughout the east for nearly three weeks has not interfered with Secretary Howell's work nor with the interest that is being taken in the next Palace Show by exhibitors.

The average person, and even many experienced exhibitors, do not understand the amount of preliminary work that is required to assemble a modern poultry show and the duties connected with the holding of the national exhibitions, including the New York shows, Boston, Chicago, Pittsburgh, Philadelphia, St. Louis, Buffalo and other leading exhibitions keeps an experienced official "on the go" more or less throughout the year. It would never do to allow the immense amount of work to be done to wait until the four or six weeks

just previous to the holding of the show. It must be ~~the~~ months and months ahead.

If the entry that has been sent to Secretary Howell can be taken as any indication, the coming show season must be a successful one. Certainly conditions for the poultry show managers and the poultrymen themselves appear better at this writing and promise better for the coming year than they have for the last two seasons. Certainly, the poultrymen are entitled to it.

WILKES-BARRE

The next Wilkes-Barre show will be held in the Ninth Regiment Armory, December 4th to December 9th, 1916, under a new system. Names and addresses of exhibitors will be placed on every cage before the birds are cooped. This will give the exhibitor a whole week's advertisement. Under the old system it is often three or four days before the birds are judged and the marked catalogue out. By this plan the patrons will at once see what the variety and sex is, also the exhibitor's name and address, which will be placed on every coop whether the exhibitor is there or not. All coops will be marked alike, no discrimination. All other shows are held on this plan and why not Poultry shows.

Poultry judges are just as honest as other judges and we know it. We want you all with us at our 1916 show. We want to make it the banner show of the State. Under the new system and a whole week's advertisement, we expect every broad-minded poultry fancier in the State to show and try and help this reform as well as to show that you have confidence in the Poultry Judges.

F. N. ROLL, Secretary.

S. C. AND R. C. REDS THE CRIMSON STRAIN
New York State Championship R. I. Red Club and Red Breeders Club. Winners New York State Fair, Grand Central Palace and elsewhere. Write for mating list and prices.

CHINA HANCHETT, VERONA, N. Y.

McCONNELL'S S.C. BLACK MINORCAS

America's most famous trapnested egg producing and exhibition strain. Winners at America's largest shows. Exhibition and breeding stock for sale. 1916 sales list out June 15th.

J. V. McConnell, Box 27-G, Garden Grove, Calif. U. S. A.

Fair-Acres Rocks Win at the Great Boston Show

White Plymouth Rocks Buff Plymouth Rocks
Some Real Bargains in Day Old Chicks.

Eggs for Hatching Write for Price List
HOWARD P. SOULE, Prop. Millis, Mass.

SUMMER SALE

For the first time in the history of Wilburtha Poultry Farms, we are offering many of our high winning birds and other valuable breeders at reduced prices, during the month of August. S. C. White and Buff Leghorns, S. C. Rhode Island Reds, Columbian Wyandottes, Columbian Plymouth Rocks, White Plymouth Rocks. Many of these birds could not have been bought early in the season at any price.

Write for our illustrated summer sale which give full particulars.

WILBURTHA POULTRY FARMS,

CHAS. J. FISK, Owner

M. L. Chapman, Gen. Mgr. D. G. Keyler, Supt.
32 River Rd., Trenton Junction, N. J.

U. R. FISHEL'S WHITE PLYMOUTH ROCKS

Have won at 5 International Expositions, 7 State Expositions and many of the largest Poultry Shows. Our winning First Prize cockerel the most coveted Prize at every show we exhibited for the past two years is a record unequalled.

EXHIBITION BIRDS SELECTED BREEDERS UTILITY FOWLS

that carry blood lines no one else can give you. Better Quality than ever for our customers. Write me your wantt please.

U. R. FISHEL, Box B, HOPE, INDIANA
EGGS FOR HATCHING AT ALL TIMES

JOHN H. ROBINSON A CANDIDATE FOR SECRETARY OF A. P. A.

Widely Known Poultry Authority and Former Editor-Owner of Farm Poultry Enters the Field for Elective Office

The following statement announcing his candidacy for Secretary of the American Poultry Association has been sent to the poultry press by John H. Robinson, former editor-owner of Farm Poultry. Mr. Robinson is widely known to the poultrymen of the United States and Canada as one of the foremost poultry writers and authorities of the day. He is experienced in active poultry raising, a clear thinker and while not generally accredited with that ability, he should be considered one of the country's best authorities on Standard poultry. Mr. Robinson joined the American Poultry Association, December 20, 1907. He was a member of and acted as Secretary to the Committee that wrote the present Constitution and By-Laws of the Association. In announcing his candidacy thus early for the election that takes place next winter Mr. Robinson is serving fair notice on Secretary Campbell and others who have talked of entering the race.

In his statement Mr. Robinson has outlined some new thoughts for the American Poultry Association to consider. Whether it is advisable for the Association to transfer the editing of the Standard to a Secretary and have an official organizer as Mr. Robinson suggests is something to be considered. Certain, it is that the methods of the past as regards the writing and compiling of Standards should be changed if the best quality of work in writing and compiling the official guide for show room and breeding, as well as text books is desired. Mr. Robinson's statement is as follows:

"Editor American Poultry World:—

"When the American Poultry Association began to pay its Secretary for his entire time its most pressing need was for members. So it chose Secretaries of ability as organizers, and in a period of less than ten years its members increased more than tenfold. Conditions being such that increase in revenues does not automatically keep pace with increase in members, the Association is trying to extend its publishing business. Although much earnest effort and good money have gone into the preparation of new books, the work has not gone forward expeditiously in most cases because the plans do not meet all conditions affecting them and the methods of working are unwieldy.

"The Association now publishes the Standard of Perfection, and (through another publishing concern) an elementary text-book. It has in preparation or authorized, a market poultry and egg standard and six separate breed standards. Its plan for breed standards contemplates several times as many. All these books 'overlap' far more than is advisable, and are so related to the general Standard that they must be revised whenever it is. The Association also publishes for free distribution to members an annual report and a quarterly bulletin.

"So large a program of publishing short-lived books can be carried out profitably only by careful planning to make each book meet a particular demand without interfering more than is absolutely unavoidable with the sales of others, and by thorough preparation to bring the whole series out at about the same time, thus insuring for each the longest possible period of profitable sales. The Association is so far committed to this line of work that, no matter how little its plans may accord with the ideals of individual members, all who have the welfare of the Association at heart must try to forward its plans.

"I have on several occasions in the past eight years declined to render the Association service in editing Standards. My prime reason for doing so was that I knew that the

kind of work that would be expected of me could not be done under the existing conditions. I am no more disposed now than I was on those occasions to undertake work of this kind under conditions that make good work impossible, but, at a time when it seems to me that the Association's most pressing need is for an efficient and economical organization of its publishing projects, and when I am in a position to proffer such service as I have declined in the past, I have considered very fully the possibilities of doing what the Association wants to do in the publishing line, and—having satisfied myself that it could be done if present plans were somewhat altered and methods changed, and that under certain conditions I could do the kind of work expected, I am stating the case to a number of representative members to ascertain the probable attitude of the Association toward my suggestions.

"In regard to publications based upon the 1915 Standard, all that can be done is to proceed with present plans as far as books can be completed with reasonable expectation of satisfactory sales. What I have to suggest relates to plans and preparations for the 1923 Standard and books co-ordinated with it. I believe that it is entirely practical to get out a general Standard far in advance of the present one,—more useful to breeders and exhibitors and adapted to extensive use as a text-book, and as many breed books as are desired, almost simultaneously. I further believe that it is quite practical to make the annual report of the Association a salable book, indispensable to those actively interested in poultry culture and the best record of poultry matters of permanent interest extant.

"Considering what the Association wants to do in the publishing line, considering the functions of the Secretaryship as prescribed in the Constitution either directly or as a corollary of some provision of the Constitution, and considering the many points in which editorial and secretarial qualifications are alike; it seems to me that at this particular stage of its development it would be good policy for the Association to have as Secretary a man capable of editing its publications from start to finish. If my views as to the further development of the functions of the Secretary and of publishing projects look good to members, I would like to have the office of Secretary for such a period as is necessary to carry out the general plan given.

"In this plan the general Standard would be remodeled along lines that without changing its special character would give much more general information about the breeds described and about matters relating to the application of the Standard.

"The breed books would be designed not to take the place of the general Standard for those interested in one breed, but to supplement it for them. No attempt would be made in the breed books to standardize methods of mating or anything else beyond what the general Standard does. The aim in each would be to describe and discuss breed and variety characters on the basis of the Standard description but more fully than is necessary or

possible in the general Standard, and to bring together for the specialist and for preservation in permanent form the literature of permanent value relating to each breed.

"Free distribution of the publications of the Association would be limited to the quarterly bulletin, which would report the proceedings in condensed form, with financial statements and the text of acts and resolutions in full.

"The annual report of the Association would be developed as a year-book, containing full reports of the proceedings, a report by the Secretary upon the state and progress of poultry interests during the year, reports of addresses and reprints of articles of extraordinary and permanent value, latest information about requirements and regulations for market poultry and eggs, all statistics of the poultry industry in America obtainable, biographical sketches of persons eminent in poultry work deceased during the year, and whatever may be included in such a book to make it meet the specifications given above.

"When a new breed or variety was admitted to the Standard in the interim between revisions of the general Standard, the year-book would afford an opportunity to furnish the Standard for it to owners of copies of the general Standard in which it did not appear, and it could also be used to give such matter relating to a new breed or variety as was used in breed books, in case it was not expedient to revise an old breed book or to issue one for a new breed.

"The market poultry and egg standard would not be included in the series. The matter appropriate to it would be distributed according to its character in the other books,—permanent matter in the general Standard or the breed books, matter subject

COLUMBIAN WYANDOTTES

Twelve firsts at three 1915 shows, also 1st pullet, cockerel, cock, pen and 4th hen at Brooklyn Show. Choice breeding stock for sale. Correspondence invited. Horseshoe Poultry Yards, Hicksville, L. I., N. Y.

PINE CREST

S. C. White Orpingtons

Heavy laying strain with showroom record. Four grand pens headed by sons of Madison Square winners. Five and three dollars for 15 eggs. Baby chicks after March 1st. Catalogue.

MRS. W. HOUGH

Pine Crest Farm,

Royal Oak, Michigan

Rowans Black Spanish

Blue ribbon winners at America's leading show Panama-Pacific, Boston and Madison Square Garden, Chicago. If you want stock that will win in any competition I can furnish your needs.

If you want eggs that will hatch prize winners I have the quality you want.

Try Black Spanish

They are healthy, vigorous and prolific layers of large white eggs. Hatching eggs \$5.00 per thirteen. Each additional thirteen \$4.00.

R A. ROWAN LOS ANGELES, CALF.



CHAMPION CRUSADER

1st Cockerel at Hagerstown and Syracuse 1915.

Regal Summer Sale

In order to make room for my large flock of rapidly growing chicks, I am offering for sale 600 selected breeders at remarkably low prices. Here are a few bargains.

No. 27—Breeding pen of Dorcas stock, consisting of six fine yearling hens and male. A good pen to build up a heavy laying flock. Sale price \$25.00.

No. 18—Well mated pen of five yearling hens and male, all bred from special matings. Valued \$50.00. Sale price \$35.00.

No. 7—300 yearling hens, splendid value at \$2.00 each.

Send for free sale list, giving complete list of bargains. Eggs from prize matings, \$2.50 per 15, \$4.50 per 30, \$6.00 per 45, \$12.00 per 100. Utility matings \$6.50 per 100.

REGAL COCKERELS AND PULLETS

This season I have over 2,000 early chicks—the best I ever owned. If you want to make a winning at your State Fair, let me quote you prices.

John S. Martin, Box W, Port Dover, Canada

to change at any time and statistical matter in the year-book.

"The plan does not consider the elementary text-book which must be dealt with according to terms of existing contracts relating to it.

"The work of getting out the year-book would be, as the work of getting out the proceedings is now, a part of the regular duties of the Secretary.

"To carry out the plan for the general Standard and the breed books it would be necessary first for the secretary as editor to prepare a comprehensive outline for the entire series, and to revise this until it met the approval of the Committee on Standards. Then the plan would be submitted to the Association and—as finally approved by it at a regular meeting—would not be open to reconsideration at any later meeting. The plan having been thus decided upon, the editor—working under the supervision of the Committee on Standards, and working with it and the necessary sub-committees—could do the editorial work as it should be done, and bring the books out on schedule time:—provided the work is started in good season. To get the series out in 1923, the preliminary editorial work would have to begin early in 1918.

"Once the general Standard and the breed books are finished on a consistent plan, there will not be so much work in future revisions until the time comes to take another long advance step. In the natural evolution of breed books of the type indicated there will come a time when the Association can profitably publish variety books for many of the popular varieties. Eventually, too, there will come a time when the Association will find it worth while to publish such similar books relating to other kinds of small stock as will find ready sale through the poultry press. That, however, is a long way off. Personally I am interested only in doing what I can to bring the plans to which the Association is already committed to a satisfactory issue."—John H. Robinson.

ST. LOUIS POULTRY SHOW RE-ORGANIZES

At a meeting of the St. Louis Poultry Show Association it was decided to hold the next show in the Coliseum Thanksgiving week, November 24 to 30, inclusive. The association has been reorganized and a state charter will be applied for. Chas. Key Cullom was elected secretary-treasurer of the organization and the following officers were re-elected for one year: Henry Steinmesch, president; J. A. Rou, vice president, and a Board of Directors composed of the foregoing and Judge W. W. Henderson, William Westhus, E. W. Mahood, T. L. Horn, C. L. Schaper, George J. Deuber and Wm. C. Smith.

The newly-organized St. Louis Pet Stock Association and the St. Louis Pigeon Fanciers' Association will combine with the poultrymen in the next Coliseum Show. Robert Joos of Chicago will place the ribbons in the pigeon department and R. C. Knill and Charles S. Gibson, president and secretary respectively, of the National Pet Stock Association, will judge the pet stock exhibits. A complete list of poultry judges will be announced in the near future.

It is announced several specialty clubs will make St. Louis the official show this year, and Secretary Cullom is in touch with a number of state and national organizations in an effort to land the annual meetings for the Mound City.

Monthly meetings of the St. Louis Poultry Show Association are being held in the private dining room of the Marquette Hotel.

TOMPKINS' SPECIAL SALE

Harold Tompkins, Box W. Concord, Mass., has issued a Special Stock Sale list of his Single and Rose Comb Reds. His prices are very attractive, for he offers a great share of his famous breeders at evidently half values. Red breeders had best get this list for their convenience, such opportunities come but once a year.

THE FIRST OHIO POULTRY FIELD DAY

NOTE:—We believe it was S. T. Campbell, Secretary of the American Poultry Association, who suggested a Field Day for Ohio Poultrymen. Acting on his suggestion, the Ohio Poultry Breeders Association made arrangements for one to be held at the Ohio Experiment Station at Wooster. This took place in June and as the accompanying report describes it was a splendid success. Field Day Meetings for poultrymen have been held in a number of states and have had a wholesome effect in cementing good fellowship and bringing about better co-operation between poultrymen. We hope the time will come when the poultrymen of every state will have a Field Day, not only one a year, but several.—W. C. D.

THE first annual poultry field day of the Ohio Poultry Breeders' Association was held at the Poultry Plant of the Ohio Experiment Station, at Wooster, Ohio, Thursday, June 22nd. During the course of the day there were about 500 visitors present from all sections of the state. The visitors began to arrive about 8:00 o'clock in the morning, and were coming and going throughout the day. The morning was devoted to getting acquainted and a tour of inspection of the Poultry Plant under the direction of Mr. W. J. Buss, who has direct charge of the poultry work.

At 1:00 o'clock in a large tent located on the grounds Mr. F. C. Stier, President of the Ohio Poultry Breeders' Association, called the meeting to order, and a number of speakers presented subjects of timely interest.

Professor Horace Atwood of the University of West Virginia was the principle speaker of the afternoon, and he delivered a very instructive talk on the subject of hatching and raising chicks. During the past few years West Virginia University has been giving considerable time to the subject of raising chicks and has conducted extensive experiments. Professor Atwood is particularly qualified to speak on this subject, and he presented the matter in such a way that despite the heat of the day the audience was very attentive.

The next speaker on the program was Mr. M. C. Kilpatrick of the Extension Department of Ohio State University, who spoke on the subject of marketing eggs. He emphasized particularly the importance of taking proper care of the eggs on the farm, and explained the losses that occur in Ohio due to the improper handling of the eggs. Mr. Kilpatrick has made a special study of this subject and has spent considerable time visiting the various poultry associations in an effort to improve the egg market of Ohio.

Mr. F. S. Jacoby gave a short talk on caponizing and suggested the capon as the solution of the problem of fresh meat during certain seasons on the farm, and advised the caponizing of surplus cockerels that were not of sufficient quality to make them desirable as breeders. This was followed by a caponizing demonstration by Mr. Arthur Bayes. The crowd was then shown the Poultry Plant by Mr. Buss.

The Ohio Experiment Station is very beautifully located upon gently sloping hills about a mile from the city, and

makes an ideal place for a field day. In June 1917 the second annual field day will be held at the same place.

The poultry work at the Wooster Experiment Station is comparatively recent, but due to the work of Mr. B. E. Carmichael, Chief of the Animal Husbandry Department the work has been rapidly advanced until today Ohio boasts of one of the leading Experiment Stations of the country. Mr. W. J. Buss is extremely practical in all his experiments as is evidenced by his recent bulletins which present truths and facts of experiments actually performed under farm conditions.

The next meeting of the Ohio Poultry Breeders' Association will be held at the State Fair Grounds, Thursday, August 31st, at 1:00 P. M. A large tent will be provided by the State Fair Management in which the Ohio State University will have an educational exhibit and other features of interest. This tent will be headquarters for Ohio Poultry Breeders during the entire week. An interesting program is being arranged which will include a tour of inspection of the Poultry Plant of Ohio State University as well as a visit to one or two poultry plants in the vicinity of Columbus.

NO STRING MEN AT YORK

At Ye Grand Old York Fair, October 2-6, 1916, inclusive, the management will start an innovation—the elimination of string men, road men, etc., from competition. It is most significant that a fair of this age, size and prestige should start this movement and the success of York as a purely fanciers' show this season will be carefully watched by other show managements and exhibitors in general. Those familiar with York know that the best of care will be given the birds, no birds showing any signs of disease will be cooped and that the big line of cash prizes has no strings attached. Judges of splendid reputation have been secured and premium list giving all information may be had by writing H. C. Heckert, Sec., 10-12 W. Market St., York, Pa.

NEW JERSEY STATE SHOW

The annual exhibit of the New Jersey State Poultry Show will be held at Elizabeth, N. J., Nov. 29 to December 2. The awards will be placed by Wm. Hobbs, Manager Sunswick Poultry Farm; M. L. Chapman, Manager of Wilburtha Farms; Louis P. Graham, and J. C. Punderford. The show will be held under the auspices of the Union County Poultry Association of which Charles J. Fisk, owner of Wilburtha Farm, is President and Rufus Delafield, owner of Sunswick Farm, is first vice president. This show will make the annual Elizabeth, N. J. show one of the largest in the east next season. Announcement will be made later when the premium list will be ready for distribution. It will contain a very attractive list of specials, which will be of interest to all exhibitors.



FASHION PLATE BUFFS

Trap-nested for heavy egg yield, line-bred for vigor and to win—three in one, a triple value not found outside the FASHION PLATES.

We have the cleanest lot of Head line breeders—February and March hatch that were ever offered.

Exhibition birds sold at real value, conditioned and trained without additional cost.

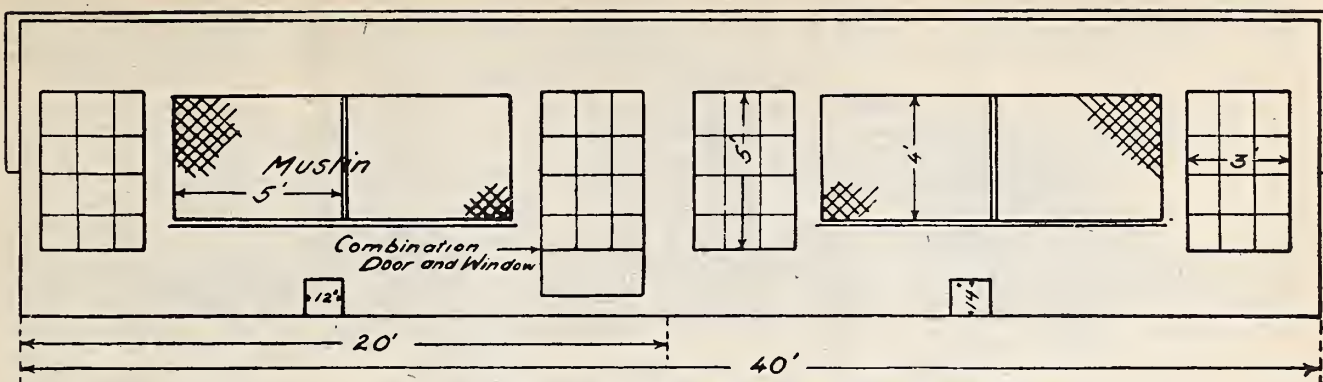
Tested breeders that have the blood lines to produce the best. Utility fowls raised from trap-nested families, at almost food prices—all sold guaranteed to please.

Send for the FASHION PLATE BOOK illustrated from cover to cover, contains description of all surplus stock with price attached; matings, eggs for hatching, etc. FREE.

A. E. MARTZ,

(Buff Orpington Specialist)

Box E, ARCADIA, IND.



FRONT ELEVATION OF THE NEW JERSEY LAYING HOUSE

Poultry houses with fronts similar to the above, the window and muslin-front details being suitably adapted to the climatic conditions, are practical and thoroughly satisfactory in nearly all sections of the country.

SOME SPECIAL POULTRY HOUSE PROBLEMS

By Prof. H. R. Lewis and Homer W. Jackson

(Continued from page 729)

place. Sunlight entering the windows in the peak, falls on the dropping-boards and perches, where it is of little advantage to have it, while only a small area of the floor ever receives the direct rays of the sunlight. Without question, a poultry house of the shed-roof type, and with the openings as illustrated in the accompanying blue print plans, will provide sunlight over a much greater area of floor space than is possible with the low-fronted semi-monitor type house.

Question 6. Do you find roosting closets necessary in open-front houses to protect hens from extreme cold on winter nights?

We do not find roosting closets necessary in our coldest weather and for that reason never provide any, even for Leghorn flocks. By having a twenty-foot house, the birds are at a considerable distance from the front and the air has a chance to become warm and lose its velocity before it reaches them. As will be seen in the plan, we break up our houses by providing cross partitions, every twenty to forty feet and they are extended well in front of the perches. These partitions with the dropping-platforms in their usual position, form all the enclosure needed to keep the birds comfortable in the coldest weather that we have to encounter.

Question 7. Are partitions required in long houses to prevent drafts, and how close should they be placed?

We regard partitions as very important in long houses and recommend placing them not over forty feet apart—twenty feet apart is better. These are necessary in order to break up the air currents that otherwise will be found to exist in all open-front houses of any considerable length. Poultrymen who prefer to have their long houses as nearly as possible in one room, do not carry the partition as far forward as is provided in the plans of the New Jersey

Unit House, but in all cases they should extend at least six to eight feet beyond the perches. These partitions not only protect the hens from drafts, but they also give the hens a measure of privacy, at the same time leaving them at liberty to go from one end of the house to the other at will.

Question 8. What kind of litter have you found most satisfactory in the laying house?

Rye and wheat straw make the best litter. Oat straw and buckwheat straw are very good, but brittle and much less satisfactory in ordinary use. Rye straw is tough and lasts longer than any other, but on account of its length is not so likely to make a satisfactory scratching litter. Some poultrymen also object to rye straw on account of the beards, which occasionally cause injury to the fowls by lodging in mouth and eyes.

COLISEUM ANNOUNCES THEIR JUDGES FOR 1916

Following is the list of judges selected for the Chicago Coliseum show together with the classes that will be assigned them. Some slight changes may be made but in the main the breeders can depend upon this list. A. F. Krummer, Butler, Pa., S. C. Red cockerels, hens and old pens; R. C. Red Cocks, pullets and young pens; White Plymouth Rocks, S. O. Black Minorcas, Jas. A. Tucker, Royal Oak, Mich., S. C. Red cocks, pullets and young pens; all Sussex, all Campines, Newton Cosh, Vineland, N. J., all Barred Rocks, George Wells, Oshkosh, Wis., Col. Wyandottes, Anconas, Light Brahmas, all Cochins, all Bantams, Blue Andalusians, W. C. Pierce, Hope, Ind., White Leghorns, Hamburgs, Cornish and

Buttercups and Dark Brahmas. J. C. Johnson, Kenney, Ill., Partridge Rocks, all Langshans, all Polish, Buckeyes, Silver Penciled Rocks and Wyandottes. Herman Rikhoff, Indianapolis, Ind., all Brown, Buff, Black and Silver Leghorns. Leonard Rawsley, Columbus, Ohio, all Buff Orpingtons, all Blue Orpingtons, Black Orpingtons, cockerels, hens and young pens. C. S. Byers, Hazelrigg, Ind., all White Orpingtons, Black Orpingtons, cocks, pullets and old pens; all R. C. Orpingtons. Geo. Hackett, No. Freedom, Wis., Partridge Wyandottes, Houdans, all non-standard varieties except Buttercups, all water fowls. Ralph Whitney, Rochester, Minn., White Wyandottes, White Minorcas. H. J. Goette, St. Paul, Minn., Silver Wyandottes (club meeting). Chas. V. Keeler, Winamac, Ind., Buff Rocks, Buff, Golden and Black Wyandottes. Olin Colip, Atlanta, Ind., all Turkeys. Re member the dates, Dec. 13, 14, 15, 16, 17 and 18. Show opens on Wednesday and closes Monday night. Premium list Nov. 1st. Entries close Nov. 25th. Address, Secretary, until Nov. 5th, Indianapolis, Ind., and after Nov. 5th, New Southern Hotel, Chicago, Ill.

YANT'S BARRED ROCKS

Won the Diamond Special for Best display at the Chicago Coliseum, December, 1914. They are the kind you have long been looking for. Write me.

JOHN W. YANT, Route 24, CANTON, OHIO

S. C. RHODE ISLAND REDS

We have the birds to help strengthen your flock. For prices and descriptions write

GEO. W. WHITE, HAMILTON, MD

DEER'S QUALITY WHITE ROCKS

Some extra nice young stock ready for the Fall Fairs and Shows. Write your wants.

F. L. DEER, R. R. 1, FRANKLIN, INDIANA

JACOBUS CAMPINES GOLDEN & SILVER



At each of the last two Madison Square Garden, N. Y., Shows I won more firsts than all my competitors, February, 1915, seven firsts; January, 1916, six firsts. That is I won thirteen out of a possible twenty firsts. Let me start you right as I have others. Egg prices now one half.

M. R. JACOBUS, Box 3-W, Ridgefield, N. J.

A Wonderful Achievement With Columbian Wyandottes

In the two most remarkable classes of Columbian Wyandottes ever shown my birds practically made a clean sweep, viz: At New York State Fair and New York Palace Show. These winnings were:

Syracuse—2nd and 4th cock, 1st and 2nd cockerel, 1st, 2nd, 3rd, and 5th pullet, 1st and 2nd pen.

Palace—1st cockerel in a class of 23; 2nd, 3rd and 4th, pullet in a class of 25, 1st pen in a class of 8, 3rd hen in a class of 13.

I won the Wilburtha Championship Challenge Cup which represents the Championship for the year in this variety.

No such winnings were ever made by any other Columbian Wyandottee breeder. My birds are beyond comparison and I have a large selection in young stock to sell. Yards are mated. Mating list ready January 20th.

Chas. D. Cleveland, Sunnybrook Farm, Box W, Eatontown, N. J.

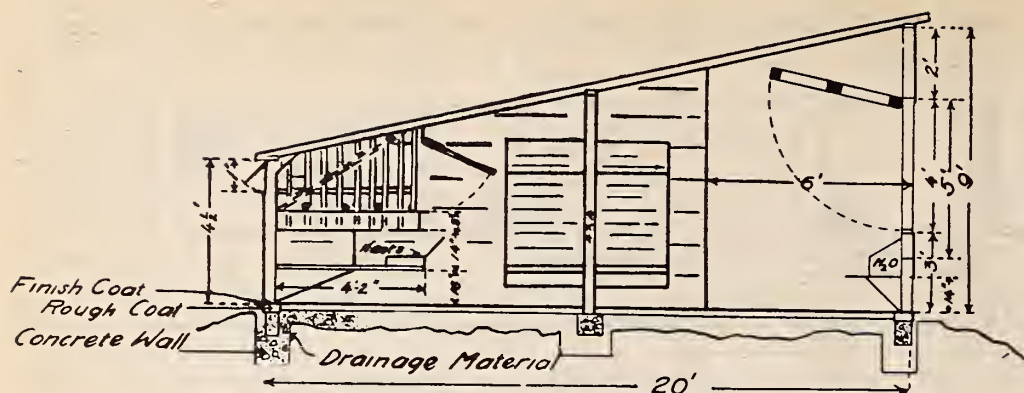
A SPECIAL SUMMER SALE OF BREEDERS AT REDUCED PRICES TO MAKE ROOM FOR YOUNG STOCK.

We have the best lot of chicks we ever hatched. About 800 started. Our earliest began laying in May and we expect to be in great shape to care for our fall trade in exhibition stock. We will keep on hatching until July 15th. or 20th.

FERNBROOK FARM,

A. C. Bouck Mgr., Menands Rd.,

ALBANY, N. Y.



CROSS-SECTION NEW JERSEY LAYING HOUSE

In this cross-section, note that a drop-shutter is indicated in front of the perches. Professor Lewis states in his article, however, that roosting closets are not required in New Jersey and it is possible that they are seldom needed even in quite cold climates, except for large-combed fowls. Roosting closets were first introduced at the Maine Station, but after a few years' use were abandoned as unnecessary.

SPRINGFIELD, ILL., BIG SHOW

Secretary A. D. Smith, Quincy, Ill., announces that the next state-show will be held at Springfield, Ill., December 28-January 3. This will be the 23rd annual exhibition of the Illinois Poultry Breeders' Association, which was formed by consolidating the Illinois State Poultry Association with the Illinois Branch of the American Poultry Association.

The well-known officers are: President, D. T. Heimlich; Vice-President, Geo. Rudy; Secretary-Treasurer, A. D. Smith; Superintendent, Ed. Brown. The judges are: Messrs Russell, Heyl, McCord, Johnston, Klen, Hale, Heimlich and Leland.

The officers and present members of the association desire that it shall be all its name implies—an association of every breeder of fancy poultry in the State of Illinois.

It is planned, also, as soon as they are able, to send out a monthly bulletin to every member, as the Missouri Association is doing, and thereby accomplish a great deal of good. It is only by hearty co-operation that this result can be accomplished, therefore every breeder of Standard-bred poultry in Illinois should send \$1 to the secretary, A. D. Smith, to pay for a year's membership in this association.

Every member of the A. P. A. or life member of the Illinois State Association automatically becomes a life member of the Illinois Poultry Breeders Association, therefore they need but few more members to bring the membership up to one thousand. It will be a sufficiently large body to make itself a power for good in Illinois.

Following are the "Features" to be advertised: "Official and Market Catalogues Free;" "Champion Male, Female and Pen of Every Variety and of Entire Show;" "Em-

list to interesting exhibitors who ask for it.

CAMPINE CLUB ELECTION

The recent election of the American Campine Club resulted with the entire present staff of officers being retained for the year 1917. Officers are as follows: President, M. R. Jacobus, Ridgefield, N. J.; First Vice President, N. E. Luce, Los Angeles, Calif.; 2nd Vice President J. H. Prudhomme, Thurmont, Md.; Secretary-Treasurer, Mrs. C. H. Owings, Dumont, N. J. Members of the Executive Board are C. A. Phipps, Wayland, Mass.; S. V. R. Martling, Ridgefield, N. J.; Mrs. A. A. Carver, Seville, Ohio, together with the president and secretary. The sixth annual business meeting and club show will be held at Gerard Central Palace, N. Y. City., December 5-9, 1916.

Poultry Houses and Fixtures

SEVENTH EDITION. REVISED AND ENLARGED. DOWN-TO-DATE

STANDARD WORK ON POULTRY HOUSE CONSTRUCTION

James E. Rice, Professor of Poultry Husbandry, Cornell University, Ithaca, N. Y., states: "'Poultry Houses and Fixtures' is the best work yet written on the subject. I shall recommend it to our students as a text book on the subject of poultry houses."

COMPLETE PLANS FOR PRACTICAL BUILDINGS AND EQUIPMENT

PARTIAL CONTENTS OF THE BOOK:

Building a Poultry House: Facts to be Considered by the Poultryman Before Construction. The Influences of Location, Soil and Climate. Full Details of Construction.

Closed Front Houses: A Five-Pen Laying House. House for Laying Hens. Poultry House with Hallway. Double Poultry House. House for City Lot. Cheap House for Small Flock. Continuous Brooding and Laying House. Bills of Materials and Interior Equipment for these Houses.

Scratching Shed Houses: Poultry House and Scratching Shed. House for Southern Breeders. Scratching Shed Colony House. Roosting Room and Scratching Shed. A Tennessee Poultry House. Maine Experiment Station Curtain Front House. Maryland Curtain Front House. Cloth Filled Frames in Place of Glass Windows.

Open-Front Fresh-Air Poultry Houses: Tolman 20th Century Fresh-Air House. California Poultry House. Fresh-Air House for Cold Climate. Open-Front House for City Lot.

Portable Poultry Houses: Sled Runner Colony House. Type of Movable House Used in England.

Exterior Fixtures: Portable Coop at Low Cost. A Good Roost Coop. Piano Box Weaning Coop. Shed for Weaned Chicks. Dry Goods Box Coop. Brood Coops. Crate for Shipping Day-Old Chicks.

Interior Fixtures: Successful Automatic Feeder. Coops for Breaking Up Broody Hens. Nest Boxes. Practical Feeding Troughs. Grit Box. Safety Trough for Chicks. Drinking Fountain for Chicks. Government White Wash, Etc.

THIS BOOK CONTAINS OVER 150 ILLUSTRATIONS

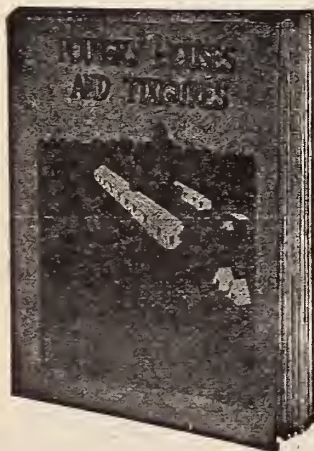
Unquestionably the most instructive and comprehensive work on the construction of poultry houses and appliances that has been compiled to date. Every house and fixture described in this book is in use on the plant of a successful poultryman; is simple, labor-saving and reasonable in cost.

PRICE 50 CENTS, POSTPAID

Or 75 cents including a year's subscription to American Poultry World, or will be sent free for two annual subscriptions to American Poultry World at 50 cents each.

American Poultry Publishing Company,

Buffalo, N. Y., U. S. A.



Government Work For Poultry



Conducted by Homer W. Jackson

POULTRY DEMONSTRATION WORK

Is There a More Direct and More Profitable Way of Getting Poultry Keepers Interested in Improved Methods Than by Issuing Bulletins and Holding Institutes? What the United States Department of Agriculture is Doing for the Poultry Industry of Louisiana

One of the lines of activity of the United States Department of Agriculture, which has been more extensively developed in the south than in other sections of the country, is "demonstration" work.

In this branch of agricultural instruction, the government enlists the co-operation of farmers at various points throughout the country, who agree to adopt approved "scientific" methods in the various branches of their farm work. Such farmers have personal attention and instruction from competent representatives of the Department of Agriculture, the expectation being that these "demonstration farms" will serve as local centers for the spread of better methods of farming by actually and successfully illustrating the superiority of such.

While this work has been developed much more extensively in the south than elsewhere, the apparent success of the method has been sufficient, it would seem, to warrant the Department and State Agricultural Colleges and Experiment Stations generally in its widespread adoption.

Where are We Headed for?

I confess that I do not see where the present diversified and highly specialized lines of agricultural instruction are going to lead us. Some one may have in his mind an orderly, systematic plan of development for the work with the various lines properly co-ordinated and with a definite stopping place in view, but just as an innocent by-stander, doesn't it look to you as if "extension" work has the bit in its teeth and is going at a rapid pace no one knows where?

One thing is certain, however, and that is that communities that can scarcely be reached by bulletins, farmers institutes and other regular means of agricultural education are keenly interested in all lines of demonstration work and are quick to adopt methods or equipment that have proved successful before their own eyes.

Anyway, whether we know where we are going or not, we are on the way; and poultry keeping ought to receive its full measure of attention in "demonstration" farming as in all other lines of extension education. Up to the present, little

real demonstration poultry farming has been attempted, either south or north. Some of the Poultry Departments of our State Colleges and Experiment Stations have developed special lines of local poultry demonstration work (marketing, treatment of disease, etc.) but there are few that have taken this matter up along regular demonstration lines. Just by way of directing attention to the subject I want to give a brief description of work being done in Louisiana by the United States Department of Agriculture which has had a poultry expert (Professor A. F. Rolf) regularly employed for about a year and a half.

How it Works in Louisiana

One special difficulty that Professor Rolf had to contend with was that the Louisiana State Agricultural College has no poultry department, and throughout the South generally little experimental work has been done with poultry. In recommending improved methods, therefore, the poultry expert, working in southern states, can only take the results obtained at Connecticut, Maine, New York or other northern experiment stations and adapt these to local conditions to the best of his ability.

Professor Rolf found that many of the Louisiana farmers quite frankly doubted the practicability of making these adaptations, and the chances are that they had mighty good reasons for their skepticism. Clearly, here was an especially good field for "demonstration" poultry farming. Before farmers could be greatly interested in improved methods, it must be shown that real improvement was possible and practical; there must be local successes to point to and local data to draw upon before the poultry expert in Louisiana could expect to command genuine interest and confidence.

The plan adopted by Professor Rolf, therefore, was to go into the various parishes (the Louisiana name for what corresponds to counties in other states) and with the aid of the local agricultural agent, find a few farmers who were willing to apply scientific methods to their poultry flocks under the direction and inspection of the department specialist. He sought farmers whose conditions were

typical of the average farmers in the community. Naturally, he looked for men or women who had some interest in poultry work. To these persons he proposed that he would visit their farms as often as necessary, lay out a plan for the development of the poultry plant and from visit to visit, outline the work that should be done and the methods to be adopted, with the understanding that they would follow these instructions, keep records and let their work serve as an example to the rest of the community.

Naturally, one of the most important features of this work is to get farmers to keep accurate records of results secured, without which the work would be of little value as a means of educating others. While a good many of those who were approached flatly refused to keep records, enough were secured who were willing to do it, to make a start. Not all of them kept complete records, but all kept at least some kind of a record; and it is a splendid argument for the work that, even in the comparatively short time that it has been under way and in spite of only partial co-operation, the results already are impressive and influencing large numbers of farmers who have closely observed the work done.

Results of Eighteen Months' Work

A year and a half is too short a time in which to expect any radical changes from such work, but some of the results already secured are little short of that. It has been observed that whereas, when the work was started only one of the demonstrators attempted to keep records, practically all co-operators now are keeping records at least to some extent. A year ago only two demonstrators had any pure-bred birds. Now, all but one have begun the conversion of the flock to a pure-bred basis. Every demonstrator on the list has either built new and up-to-date poultry houses during the past year or has remodeled the old ones to make them satisfactory. Previous to starting this work, only one of the demonstrators had ever practiced any selective breeding—all others collecting eggs for hatching from the general flock. This season, all but one of the demonstrators had a small flock of selected birds for breeders and most of the remainder of the fowls kept were used for the production of infertile eggs. Other farmers, not demonstrators, are showing decided interest in the work. They are asking for sets of record blanks, adopting the feeding methods, copying the houses built, and asking for help in their special problems.

Professor Rolf does some regular lecturing, but, as a rule, instead of asking the farmers to come to town to listen to him urging them to adopt radical departures from their old methods, the plan is to have the demonstrators invite their neighbors to their farms when he visits them. There the results of the work on that farm are discussed and the demonstrator himself tells what has actually been accomplished. What is generally known as "regular" extension work is not ignored of course, Professor Rolf delivers formal lectures when the occasion appears to call for such, he makes special visits wherever requested, when pos-

sible; aids in developing poultry organizations; judges fowls; assists in developing egg routes in connection with creameries; handles a large amount of correspondence and publishes various bulletins and circulars for state-wide circulation.

So far as reaching individual poultry keepers is concerned, it must be clear that this is, relatively, a much more expensive method than the kind of extension work done in our northern states. That it is more popular and more helpful among those who really need instruction, and actually cheaper in the long run, seems extremely probable.

THE LARGE BREEDS NOT WELL REPRESENTED IN EGG-LAYING CONTESTS

Breeders of the Larger Classes of Fowls Must See to it That They are More Largely Represented in Laying Contests if They Want Them to Make a Favorable Showing as Compared With Leghorns

Special reference was made in this department last month to the New Jersey Egg-Laying Contest and to the unique features that distinguish it from other contests now being conducted in various parts of the country. In a personal letter from Professor Lewis, who is in charge of the New Jersey Contest, I learn that entries are coming in rapidly, but that comparatively few pens of the larger breeds are being offered.

The conditions of this experiment provide for fairly uniform representation of the different breeds and varieties, if a sufficient number of pens are offered, and it would seem that breeders of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, etc., could well afford to make a special effort to see that these breeds are properly represented in this contest.

While pens of several breeds have occupied first place in past contests, White Leghorns have been so largely represented among the high-record pens that many are getting an erroneous impression in regard to the relative merits of different breeds as egg producers. If the general public becomes firmly convinced,

First. Barred Rocks	Number of Eggs	831
Second. Single-comb White Leghorns ..	Number of Eggs	816
Third. White Plymouth Rocks	Number of Eggs	797
Fourth. Rose-comb Rhode Island Reds ..	Number of Eggs	787
Fifth. "Oregons" (Grade Leghorns) ..	Number of Eggs	763
Sixth. Single-comb Rhode Island Reds ..	Number of Eggs	746
Seventh. Single-comb White Leghorns ..	Number of Eggs	742
Eighth. Single-comb White Leghorns ..	Number of Eggs	741
Ninth. Black Orpingtons	Number of Eggs	729
Tenth. Single-comb White Leghorns ..	Number of Eggs	
Eleventh. Single-comb White Leghorns ..	Number of Eggs	724

This record shows that the larger breeds are distinctly in the lead, and yet the overwhelmingly large proportion of Leghorns among the best pens cannot be overlooked or satisfactorily explained to the public. No breeder of large fowls will concede that this proportion would hold if their breeds were uniformly represented in the contest. Leghorn breeders are not to be blamed for taking advantage of their opportunity, but the relative merits of the different breeds as egg-producers never will be accurately established until they have fairly equal representation in point of numbers.

For this reason alone, if for no other, it is important that the larger breeds

as appears to be the case at present, that Leghorns are carrying off the bulk of the honors in all our contests, it will be due in large measure to this unequal representation.

For example, I have before me the June Report of the Fifth National Egg-Laying Contest at Mountain Grove, Missouri, which shows that the different breeds and varieties are represented as follows:

- 43 pens of Single-comb White Leghorns.
- 10 pens of Barred Plymouth Rocks.
- 6 pens of Rose-comb Rhode Island Reds
- 6 pens of White Wyandottes.
- 6 pens of White Orpingtons.
- 3 pens of White Plymouth Rocks.
- 3 pens of Black Orpingtons.

(Other breeds are in still smaller numbers.)

With such relative representation, it is not at all strange that at the end of the eighth month, the eleven leading pens include six White Leghorns and only one each of Barred Plymouth Rocks, White Rocks, Rose-comb Rhode Island Reds, Single-comb Rhode Island Reds and Black Orpingtons. The order in which the breeds now stand in the contest is as follows:

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shall be properly represented in egg-laying contests. Breeders of such fowls have an especially good opportunity to make a showing in the New Jersey Contest, and I hope that they will offer enough pens so that the directors will be able to restrict the number of Leghorn pens entered to a fair proportion.

Since writing the above, I have received the report for the thirty-seventh week of the Storrs' Contest. At this contest the larger breeds are better repre-

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sented than is the case at Mountain Grove, and it is interesting to note, in line with the above argument, that they make a correspondingly better showing. The principal breeds and varieties represented in the Storrs' Contest are as follows:

35 pens of Single Comb White Leghorns
10 pens of Barred Plymouth Rocks.
21 pens of Rhode Island Reds.

First. White Wyandottes	Number of Eggs	1667
Second. White Wyandottes	Number of Eggs	1643
Third. White Leghorns	Number of Eggs	1487
Fourth. White Wyandottes	Number of Eggs	1470
Fifth. White Wyandottes	Number of Eggs	1421
Sixth. Rhode Island Reds	Number of Eggs	1417
Seventh. Barred Plymouth Rocks	Number of Eggs	1413
Eighth. Rhode Island Reds	Number of Eggs	1396
Ninth. Oregons	Number of Eggs	1388
Tenth. White Plymouth Rocks.	Number of Eggs	1378
Eleventh. Barred Plymouth Rocks	Number of Eggs	1377

It is safe to assume that the status of these pens will be changed somewhat by the end of the year, as the Leghorns may be expected to lay better during hot weather than larger fowls, but breeders of Plymouth Rocks, Wyandottes, Rhode

13 pens of White Wyandottes.
5 pens of White Plymouth Rocks.

Other breeds and varieties were represented by only one or, at most, two pens. In the Leghorn pens is included one pen of "Oregons," or grade Leghorns, as at Mountain Grove

The order in which the different breeds now stand at Storrs, with respect to egg production is:

Island Reds, etc., will find in this report additional reason for believing that their breeds will suffer nothing in comparison with Leghorns, when they are reasonably well represented in point of number.

POULTRY PROFITABLE IN NORTH CAROLINA

A Flock of One Thousand Pullets Makes a Profit of Seventy-five Cents Each in Six Months After Paying For All Feed and Labor

In a press bulletin recently issued by the Poultry Department of the North Carolina Experiment Station, the following record is given of a successful poultry plant in that state, using the above title.

One poultry plant in western North Carolina has found egg production a profitable venture. A house was constructed of sufficient size to accommodate one thousand birds (four square feet of floor space per bird) and the birds (Single-comb White Leghorns) purchased at five months of age at sixty-five cents a head. The birds were hatched the latter part of April and the fore part of May and were not force fed. They were purchased the first of October. Moving disturbed the early layers and the flock contracted colds by being allowed to roost in a building which had some cracks in the back wall at the roost level. This error was corrected by making the roof, ends and back tight. During this month the flock produced 965 eggs. The birds were fed the following ration:

Scratch Feed

Corn	2 parts
Wheat	2 parts
Oats	1 part

Dry Mash

Corn meal	6 parts
Red dog flour	6 parts
Brn	3 parts
Beef scrap	5 parts
Ground alfalfa	1 part

The grain was given morning, noon and evening in litter so the birds were compelled to scratch. The total amount of grain per hen was two ounces per day. Only good sound, best grade grain and other feed was used. The dry mash was placed in a dry mash hopper and kept before the birds at all times. Green feed, as cabbage, collards, tender alfalfa, clover and rye, was given once a day. One gallon of buttermilk was given to each one hundred hens per day. Great care and regularity was exercised at all times both in feeding and watering.

The hens were placed in the laying house on October 1st, 1915, and were kept confined to the house at all times. The half-monitor style house was used. Good sun-

light at times was abundant through the open front. In the first six months, from November, 1915 to May, 1916, these one thousand hens laid 49,992 eggs or 4,166 dozen. The feed and labor for this period cost \$806.38 or a cost of 19 1/3 cents per dozen. This is a low producing flock so that the records are more than conservative of the results one should obtain.

A yearly contract is made, with many of the Leghorn farms of the state, by sanitariums, hospitals, private families, summer

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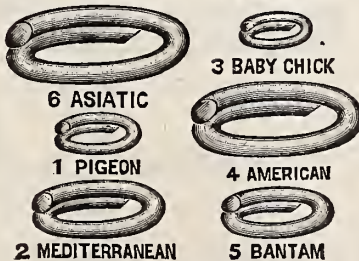
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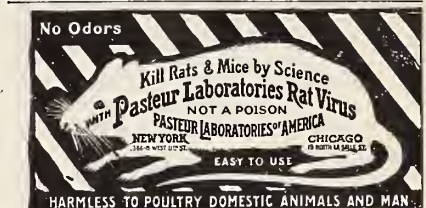


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and winter resorts and others for eggs the year round "next-day laid". That is, the eggs are delivered either the same day or the next morning. These contract prices range from 37½ cents to 40 cents per dozen. In this instance, at 37½ cents per dozen, these hens would make a gross earning of \$1,562.25, which, after paying for the labor and feed, means a net profit of \$1.51 per hen, on a yearly basis calculated on what they did the first six months which should be the poorest months for this flock.

While I do not doubt that poultry keeping is profitable in North Carolina, the record of this particular flock is to incomplete to afford satisfactory proof of the fact. The man who is critically inclined will find several points to which he can take exception.

For one thing, this account gives the figures for six months only, from which the profit for the year is estimated. This savors distinctly of prophesy—which is always a risky occupation. I hope that Professor Kaupp will follow this poultry plant through the entire year and at the end of that time will give us another statement, showing how nearly the estimate agrees with the actual results secured. If the owner makes as large a profit from May to November as he made from November to May, I shall be greatly surprised.

It is to be noted, also, that while the account is reckoned from November to May, the birds were brought the first of October and no charge is made for their feed during that month. In the final report for the year the expense for October doubtless will be added to the original cost.

The average price of 37½ cents per dozen is presumably much above the general average for market eggs in that section. The bulletin however, does not expressly state that the owner received that price. The copy reads as if the gross earnings were estimated on that basis, rather than on the prices actually received. Probably the flock would show a good profit even at market prices, but I would like to see the report more definite on this point.

An average production of fifty eggs per pullet for six months is low, but probably as much as could fairly be expected of pullets bought wholesale without any selection or culling, which is indicated by the price paid. The owner of this plant would have secured a much better average production if the pullets had been carefully culled, and doubtless he would have realized a larger income, both gross and net, even if he had by such culling raised the average price paid to as much as a dollar per head.

The North Carolina College and Station Poultry Department is doing excellent work in getting in touch with private poultry plants, encouraging them to keep records and publishing the data thus secured. However, a publication carrying the endorsement of a State Experiment Station should carefully avoid any appearance of anxiety to "make a good showing." Carefully kept records will speak for themselves; any one can make a guess.

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RANGE vs. CONFINEMENT FOR LAYING HENS

Hens on Open Range Are Better Layers But Eggs Can Be Profitably Produced by Hens in Confinement

The Ohio Experiment Station has recently concluded a series of experiments with poultry, intended to show the relative effect of range and confinement on egg production. The results are reported in Bulletin No. 291, by W. J. Buss, and are summarized in the following extracts:

Experiment 1.

This experiment was begun May 5th, 1912, and closed October 3rd, 1914, lasting 882 days. The hens used in this experiment were S. C. White Leghorns, hatched in the spring of 1910. At the beginning of the experiment

there were 99 hens in the confined lot and 103 in the lot on range.

Each lot of hens had access to two pens, each 13 by 20 feet in size, in a house of the half-monitor type, 20 by 60 feet in size. The lot in confinement had access to two yards, each 13 by 60 feet in size. These lots were covered with gravel and furnished no green food. The lot on range had access to a lot of blue grass, containing approximately two acres. A cow and some sheep were also pastured on this plot throughout the spring, summer and autumn.

The grain mixture given these hens was composed of three parts, by weight, of crack-

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ed corn and one part of wheat; and the mash mixture was composed of four parts of ground corn, two parts of wheat bran, two parts of meat scrap and one part of linseed oilmeal. The percentage of each feed in the ration used in these experiments, when half as much mash as grain is consumed, is as follows: corn, 64.8 per cent.; wheat, 16.7 per cent.; bran, 7.4 per cent.; meat scrap, 7.4 per cent.; linseed oilmeal, 3.7 per cent.

Results of Experiment 1.

	Conf'd On Range	
Average number of fowls....	85.35	95.87
Average lbs. of feed consumed per hen	146.79	145.52
Eggs produced per hen	241	278
Cost of feed per dozen eggs, cents	9.75	8.48

Experiment 2.

The second experiment to study the effects of range and confinement on laying hens was begun November 30th, 1913, using Leghorn pullets hatched in April and May, and closed November 27th, 1915, lasting 728 days. Results are reported in two periods of 364 days each, with a summary for the entire experiment.

Each lot of 57 pullets was kept in a house of the shed-roof type, 10 by 24 feet in size. The lot on range had access to a plot of blue grass, containing 1.4 acres. Some other live stock was also pastured on this plot. The hens in confinement had a run, 12 by 60 feet in size. This lot was covered with gravel and furnished no green food. The same rations used in Experiment 1 were used in this experiment.

Results of Experiment 2.

	Conf'd On Range	
Average number of fowls....	51	54
Average lbs. of feed per hen....	125.57	127.84
Eggs produced per hen.....	243.7	316.4
Cost of feed per dozen eggs, cents	8.31	6.89

Experiment 3.

This experiment was begun November 29th, 1914, and lasted until November 27th, 1915 (364 days). The pullets used in this experiment were S. C. White Leghorns, hatched at the Experiment Station during April and May, 1914.

Ration and quarters were the same as in Experiment 1.

Results of Experiment 3.

	Conf'd On Range	
Average number of fowls ...	91.2	92.67
Average lbs. of feed per hen..	55.69	58.27
Eggs produced per hen	89.7	129.1
Cost of feed per dozen eggs, cents	9.95	7.3

Value of Range

Assuming the value of the range is measured by the difference in the cost of feed per hen and value of eggs per hen, the value of the range was found to average from 26 to 67 cents per hen per year.

I presume there were special reasons for the peculiar conditions of this experiment which are not explained in this report, but taken just as it stands, it seems to have been planned to put the confined hens at great disadvantage, rather than show what could be done under reasonably favorable conditions.

In order to be fair, an experiment planned to show the relative results that can be expected from hens in confinement and on open range must not impose unnecessary handicaps on the confined fowls. For example, we know that neglected fowls in confinement invariably suffer from lack of exercise, variety and green food. If the experimenter as-

sumes that such a condition of neglect is normal for hens in confinement and does not take these points into consideration, arranging the details of his test so that these handicaps are offset, so far as is practicable within the limitations of experimental work, then we have simply a confined pen struggling under unnecessary difficulties to make a showing against a pen on open range, which either does not have to encounter these difficulties, or only in lesser degree.

In the Ohio experiment, the confined pen received no green food whatever, while the range pen had access to tender green grass most of the time. Two-thirds of the day's ration consisted of corn, cracked or meal—a ration that no practical poultrymen would think of feeding to fowls in confinement. The range pen, of course, had the same ration, but the hens had an opportunity to add some variety, while plenty of green food and unlimited exercise greatly minimized the disadvantages of a ration carrying so large a proportion of corn.


This experiment fairly shows the results that may be expected from hens confined to limited quarters, and with no provision for meeting their need for a properly selected ration, plenty of green food and enforced exercise. But it cannot be taken as showing the effect of confinement on egg production, as hens in confinement should be treated.

Under the conditions of this experiment, it really is surprising that the confined hens made as good a showing as they did, and in the face of the results here secured, it is reasonable to expect that on a ration not distinctly unfavorable, and with plenty of green food such as the range hens would have access to most of the time, the difference between the pens would be very slight, indeed, or even in favor of the hens in confinement, which would correspond with results secured by other experimenters.

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Prof. W. R. Graham, Poultry Expert for the Ontario Agricultural College at Guelph, reports:
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Pittsfield Poultry Farms Dip 1,000,000 Eggs
"Each year we use more Zenoleum in incubation. We dip our eggs and wash the incubators. After several years of thorough trial we are convinced it is very much worth while. We now use 185,000 eggs at a setting and Zenoleum is used on every hatch, just as it used to be when we set only 6,000 at a time."

OUR GUARANTEE: If Zenoleum is not all YOU think it ought to be, you can have your money back. Prices: Postpaid: 8-oz. 25c; Quart 50c; Gallon \$1.50.

Ask for our free 1915 Poultry Life Insurance Policy.
The Zenner Disinfectant Co., 370 Lafayette Ave., Detroit, Mich.
Zenoleum Lice Powder, 25c; postpaid 35c.






VARIETY vs. SIMPLE RATIONS FOR LAYING HENS

A Simple Ration Consisting of Corn Found to be More Profitable Than Variety Ration

The argument for variety in feeding fowls usually is based on the claim that it will result in larger production, and that the health of the birds will be better than where the ration is restricted largely to a single grain, which in ninety-nine cases in a hundred means corn. A common complaint among poultry feeders however, especially farmers, is that the poultry rations generally recommended call for many different grains and ground foodstuffs that are difficult to provide, making such rations impractical under ordinary conditions.

The Ohio Experiment Station recently concluded a couple of long-term experiments, designed to show the actual dollars-and-cents value of variety in the laying hen's ration. These experiments also were planned to "determine whether corn is too 'heating' or too 'fattening' for extensive use in rations for laying hens."

The following extracts from Bulletin No. 291, by W. J. Buss, give a summary of the results secured in these experiments:

This experiment was begun November 24, 1912, and ended October 6, 1915, a period of 1,047 days. S. C. White Leghorns, hatched at the Experiment Station in the spring of 1912, were used in this experiment. There were 24 pullets in each lot at the beginning of the experiment.

From the beginning of the experiment until August 15, 1913, each lot was housed in a colony house, 10 by 12 feet in size, and had access to two yards, each 38 by 200 feet in size. After this date, each lot occupied only half of the house of the size mentioned above, and had access to one of the yards. About half of each of these yards was closely planted to trees, which furnished an abundance of shade. The yards supplied grass throughout the spring and summer. The fowls had access to the yards at all times except when the ground was covered with snow.

The following rations were fed:

Lot 1.

Grain—Shelled Corn

Mash—

Ground corn, 16½

Meat Scrap, 10

(After Jan. 28, 1914):

Ground corn, 8

Meat Scrap, 5

Lot 2.

Grain—Shelled Corn

Mash—

Ground corn, 11

Bran, 4

Meat Scrap, 8

Lot 3.

Grain—Shelled Corn, 1

Wheat, 4

Oats, 1

Mash—Ground corn, 10

Bran, 10

Meat Scrap, 7

Summary of Results

Lot	Grain and Mash consumed per hen	Eggs produced per hen	Cost of Feed per doz. eggs produced
	Pounds		Cents
1	174.55	351.2	7.75
2	8.88	292.6	8.99
3	177.1	370.5	8.98

In this experiment, the average value of eggs per hen was 43 cents higher for Lot 3, which received the variety ration, than for Lot 1, which received the ration made up of corn and meat scrap, whereas the cost of feed was 50 cents per hen higher for Lot 3, showing that at the prices for feeds and eggs used in this publication, the simple ration gave better financial returns than did the variety ration.

On December 4, 1913, the second experiment to compare simple and variety rations was begun. This experiment extended over a period of 672 days, ending October 6, 1915.

S. C. White Leghorns hatched in the spring of 1913 were used in this experiment. There were 25 pullets in each lot.

Each lot of hens was housed in half of a colony house, 10 by 12 feet in size. When there was snow on the ground, the hens were confined to the houses. The hens were also confined to the houses from April 1 to June 27, 1915, in order to permit the grass in the lots to get some growth.

Rations.

Lot 1.

Grain—Shelled corn
Mash—Ground corn, 8
Meat Scrap, 5

Lot 2.

Grain—Shelled corn
Mash—Ground corn, 7
Bran, 3

OWEN FARMS

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BUFF and WHITE ORPINGTONS

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WHITE PLYMOUTH ROCKS

WHITE WYANDOTTES and

S. C. WHITE LEGHORNS

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OWEN FARMS,

115 William Street, Vineyard Haven, Mass.

MAURICE F. DELANO, Proprietor: FRANK H. DAVEY, Superintendent.

Meat Scrap, 5

Lot 3.

Grain—Shelled corn, 1
Wheat, 4
Oats, 1
Mash—Ground corn, 3
Bran, 4
Middlings, 4
Oilmeal, 1
Meat Scrap, 2

Summary of Results.

Lot	Grain and Mash consumed per hen	Eggs Produced per hen	Cost of Feed per doz. eggs Produced
	Pounds		Cents
1	106.07	185.9	8.73
2	105.76	189.8	8.54
3	124.34	201.6	10.96

For the entire experiment, the average egg production per hen was 2.1 per cent. higher for Lot 2, and 8.4 per cent. higher for Lot 3 than for Lot 1. At prices for feeds and eggs as used in these calculations, the difference between the value of eggs per hen and the cost of feed per hen was \$2.09, \$2.15 and \$1.98, for Lots 1, 2 and 3, respectively.

These experiments will go a long way toward confirming the average poultry-keeper, especially the farmer, in his belief that if hens have plenty of corn, they need little else to reach the most profitable degree of egg production under "practical" conditions.

And therein lies the danger—because it is useless to deny that there is danger in such a conclusion.

Very similar experiments were carried out at Pennsylvania Station, in 1910-1911, and a summary of results, as published in Pennsylvania Bulletin 120, is here given for comparison with the conclusions drawn from the Ohio experiments:

"Pullets of Barred Rock, Rhode Island Red and Leghorn breeding will keep in good health on rations carrying very large proportions of corn, if bran and meat scrap also are liberally supplied.

A ration of corn, bran and meat scrap does not result in heavy production when long continued;

Eggs from hens on such a ration are larger than where wheat is the principal grain fed;

Hatchability of eggs and vigor are increased by a liberal use of corn in the rations.

Further experiments will be necessary to prove that a corn, bran and meat ration is a

safe ration for general use, particularly with fowls in confinement;

These experiments were made with pullets; care must be exercised in applying results to flocks of older hens."

Years before these Pennsylvania experiments, I carried out tests along similar lines in my own flocks, where economy and low-cost rations were most eagerly sought for "personal" reasons; and in a general way, similar results were secured. That is, whenever I planned a comparative test, the corn-fed pen generally had the better of it. In spite of my experiments and wishes, however, I was led to conclude that reasonable variety was essential to permanent success.

Breed has some bearing on this question, and the fact that Leghorn pullets will give good results on a certain ration does not prove that the larger breeds will do as well. The Pennsylvania experiments, previously referred to, showed equally as good results with Rhode Island Reds as with Leghorns, but much poorer results with Rocks, which breed, of all the popular ones, is least likely to do well on a heavy corn diet.

In spite of such experiments as are here reviewed, one thing that we are not able to ignore or get around is the practical fact that poultrymen generally, especially those having most experience, wind up their bouts with corn, with the firm conviction that they must have some variety in the ration, not only to get maximum production, but also to preserve the health of their fowls. I admit that general practice cannot be accepted as scientific proof of any point in dispute, but when it is wrung out of reluctant pocketbooks, it is entitled to consideration.

I believe the general idea that corn is "heating" or "fattening" is based on fact but is due not so much to the composition of the grain, as to the way it is fed. There will be much less danger in feeding corn and generally better results all around if it is cracked and buried in plenty of litter or widely scattered over the range in order to enforce abundant exercise in getting the day's feed, instead of being fed whole so that the day's supply can be gobbled up in a few minutes, and all the rest of the day devoted to storing it up in the form of fat.

"DISEASES OF POULTRY"

This book, recently published by The Macmillan Company, is without question the most elaborate and most modern discussion of this subject that we have. While not a government publication, the authors of it are Dr. Raymond Pearl, Professor Frank M. Surface and Maynie R. Curtis of the Maine Agricultural Experiment Station, and the book is a revised and enlarged edition of the famous Maine Bulletin No. 398, which for several years has been the last word on diseases of fowls and their treatment.

This book has been much needed and deserves wide circulation. It gives full attention to the subjects of Sanitation, Prevention of Disease, etc., and it also gives detailed instructions for the treating of sick fowls, where treatment is practical.

In the case of contagious or infectious

diseases, sick fowls should be disposed of and no chances should be taken, but the poultryman who gives careful attention to the subject, who learns to discriminate in the matter of diseases, and who is interested in a really economic handling of his poultry flock, will find that, with proper attention and with suitable remedial measures, he can avoid many losses, and can do so with no risk to the health of the rest of the flock and with comparatively little trouble or expense. The extreme advice, so often given by "practical" poultry writers, that all sick fowls be promptly killed and buried or burned, has resulted in a great deal of unnecessary loss to the poultrymen who have adopted it. It sounds original to say that the "hatchet" is one's best remedy for sick fowls, and certainly that is one way of negotiating the difficulty.

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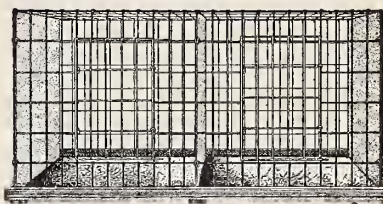
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But it is an extremely expensive way and, in many instances, is entirely uncalculated for.

"Diseases of Poultry" gives full instructions in the treatment of sick or injured fowls when such treatment may

profitably be given, and the purchase of this book, if the advice given in it is carefully followed, will prove one of the best investments that any poultryman can make.

AMOUNT OF PROTEIN FOR LAYING HENS

Fowls Will Survive a Wide Range in Nutritive Values and Continue to Give Fairly Good Results, but Profitable Production Requires Rations That Are Really Suitable for the Purpose

While poultry feeders generally have their minds made up as to the proper proportion of protein required in the poultry ration, especially the ration of the laying hen, really definite knowledge on this point is limited, after all. Experiments on this subject are always interesting and, therefore, the following extracts from Ohio Bulletin No. 291, describing some recent experiments in this line, have their value:

The object of this experiment was to study the effect of rations containing approximately 10, 15 and 20 per cent. of crude protein, upon the rate and economy of egg production by pullets. This experiment was begun December 13, 1914, and closed December 11, 1915 (364 days).

Three lots of Barred Plymouth Rocks and three lots of S. C. White Leghorns, hatched at the Station in the spring of 1914, were

used in this experiment. The pullets were divided into uniform lots early in November, and on November 15th, were started on rations similar to those used in this experiment.

Each lot of pullets was housed in a pen, 15 by 24 feet in size, in a large laying house and had access to a well-sodded yard, one-fourth of an acre in size.

The grain mixture for all lots was made up of three parts, by weight, of shelled corn and one part of wheat. The mash mixtures for the different lots of each breed were composed of ground corn, bran and meat scrap. The percentage of each feed in the ration for each lot, when consuming half as much mash as grain, was as follows:

Lot	Corn	Wheat	Bran	Scrap	Meat
1	74.4	16.7	6.7	2.2	
2	63.3	16.7	6.7	13.3	
3	52.2	16.7	6.7	24.4	

Amount and Cost of Feed and Number of Eggs Produced

Lot	Barred Plymouth Rocks			S. C. White Leghorns		
	Ave. eggs per pullet	Average value of eggs		Ave. eggs per pullet	Average value of eggs	
		Per doz. Cents	Per pullet Dollars		Per doz. Cents	Per pullet Dollars
1	104.7	22.8	1.99	92.5	22.1	1.70
2	158.0	22.6	2.98	141.5	22.3	2.63
3	123.6	22.3	2.30	132.7	22.0	2.44

Lot 2 of Rocks produced 50.9 per cent, more eggs per pullet than Lot 1 and 27.8 per cent. more than Lot 3. Lot 2 of Leghorns produced 53 per cent. more eggs per pullet than Lot 1 and 6.6 per cent. more than Lot 3. The difference between the cost of feed and the value of eggs, on the basis of the assumed prices, was \$1.09, \$1.81 and \$1.05 per pullet for the Rocks and \$1.04, \$1.78 and \$1.47 for the Leghorns. The difference between the cost of feed and the value of eggs was in favor of the Rocks in Lots 1 and 2 and in favor of the Leghorns in Lot 3. However, the Leghorns are at a slight disadvantage in this comparison because they matured a little earlier than the Rocks, and produced more eggs preceding the experiment than did the Rocks, but produced very few eggs during the last four weeks of the experiment. If the time of the experiment had been advanced four weeks for the Leghorns, so as to include their maximum production in 364 days, the difference between the cost of feed and the value of eggs would have been in favor of the Leghorns in each case.

The Leghorns were more economical producers of eggs than the Rocks. The Leghorns required less feed per unit of eggs produced than did the Rocks. The cost of feed per dozen eggs produced was 27.4 per cent. higher for the Rocks than for the Leghorns. The dry matter required per dozen eggs produced was also approximately 27 per cent. higher for the Rocks than for the Leghorns.

The bulletin gives a table (omitted for lack of space) showing the amounts of different nutritive elements contained in each ration. The nutritive ratio is easily worked out from this and is ap-

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dozen eggs produced by fowls of these two breeds, or others of similar characters.

It would not be easy to do, but I wish some of our experimenters would go a step farther in contrasting the Leghorn and the larger breeds and determine the complete productive or money-earning

value of each. Without doubt, the man who wants eggs, and eggs only, will get more profitable production with Leghorns than with fowls of larger size, but considering the increased weight and selling value of surplus stock, who can say which then would be more profitable—and having said it, furnish proof?

wait until the last minute to arrange for special premiums, but send for American Poultry World Silver Cup Offer. By taking a few subscriptions, you can obtain a handsome silver cup without any expense. Send for particulars to American Poultry World, Subscription Department, Buffalo, N. Y.

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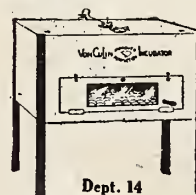
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We now offer for sale a few of our breeding birds that have produced our next year's winners.

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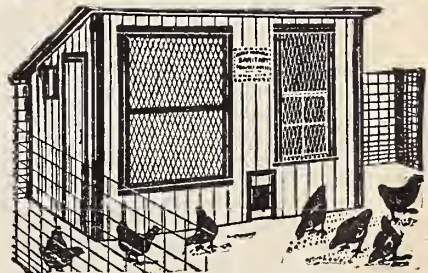
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HOW TO MAKE WHITE LEGHORNS PAY

By Le Roy Sands, Hawley, Pa.

(Continued from page 726)

son, in fact the range is of such size that it is never bare. The breeding stock are kept in flocks of 20 females to one male. These are changed frequently, thus insuring high fertility.

The dry mash system of feeding is followed and a mash composed of equal parts bran, corn meal, middlings and crushed oats with 10 per cent. to 15 per cent. of beef scraps added is used, and is kept before the birds at all times. During the winter about one-fifth alfalfa is added to the above. A feeding of grain is given in the morning and afternoon. This is usually composed of 35 per cent. wheat, 30 per cent. corn, 10 per cent. barley, 5 per cent. buckwheat and 20 per cent. oats. This is varied some according to season and prices. These rations have given us the best results and I think them the best suited for our conditions and locality. In addition to these plentiful supply of shells, grit and charcoal is always provided, with a constant supply of fresh water. Many claim that liberal feeding of yellow corn produces a creamy cast to the plumage. I have used both kinds and from my experience would say that I can see no ill effects from its use.

Hatching and Rearing

Both the small incubators and a Can-dee Mammoth Incubator are used for hatching purposes, a large capacity being required, owing to the rapidly growing demand for baby chicks, this branch of the industry having added materially to our profits during the past season.

To get good strong chicks it is necessary that the breeding stock be strong, vigorous and well matured. This not only has a material bearing on the hatching of the chicks, but on the raising as well. All know, who have had experience, that it is one thing to hatch a chick, but quite another to raise it. The average hatch at our plant is about 65 per cent. of the eggs incubated and we rear an average of 85 per cent. of the chicks hatched. This I consider very good and I think it bespeaks well for our general conditions.

When the chicks are first hatched they are placed under the hovers of a continuous hot water brooding system, and are kept here until about four weeks of age, when they are transferred to colony houses, which are equipped with adaptable hovers. Here they are allowed to range when weather conditions will permit, and this system gives the best results of any tried thus far. The chick is given plenty of heat during the critical period and receives careful attention from the attendant. After removal to

the colony houses, the close attention is not required as the chick, if it be a good one, is then well on its way as a later profit producer.

Practically Free Range is Given All Stock

The range is cultivated and seeded to oats, clovers and grass seeds in the early spring. The clover and grass get a nice start and make fine pasture for the birds during the fall until the ground is frozen up. About one acre of range is allowed to every one hundred birds. This may be alternated so while one is growing a new crop of green food, the other may be used. With this system the range is kept sweet and the evil of contamination that is ever present in the small yards is entirely disposed of.

In conclusion, I wish to say that I think anyone possessing a liking for the poultry business can duplicate our success, providing they go slow and only increase the business as the earnings from the plant warrant. That is, do not invest every cent of profit received, but keep a small balance for a working capital. It is those who rush blindly into business that make failure of it, outline your plan at the start and adhere closely to it. When we started in the business we decided that only such improvements or additions should be made as were justified by the earnings of the plant.

We have proven to our own satisfaction that S. C. White Leghorns may be kept at a nice profit. That it is necessary to make haste slowly in the poultry business if success is to be your goal. That a fondness for the business and some experience is necessary if you are to be successful.

That strict business methods are essential in this as well as any other business if you are to succeed.

That common sense is one of the main essentials, and that strict attention to the little details is an absolute necessity.

LANCASTER FAIR

F. G. Christman, Supt. of the Poultry Department of the Lancaster, Pa. Fair, writes us that the Special Premiums this year will be paid in gold coin instead of silver cups as heretofore.

The Lancaster Fair always is a warm one in the Poultry classes, and this season more interest is evidenced than in any previous year, which will make another grand show for Lancaster.

Show Dates Sept. 26th to 29th. Write Mr. Christman at East Greenville, Pa., for Premium List.

HELP YOUR LOCAL SHOW

It is not too early to begin work on plans for your coming poultry show. Don't

DEVELOPMENT OF THE DUCK INDUSTRY

(Continued from page 727)

White ducks and the same as the young Aylesbury and Rouen ducks. The adult in these varieties is nine pounds in the drake and eight pounds in the duck. The Standard weights of the Muscovy ducks are, drake ten pounds, duck seven pounds in the adult, and drake eight pounds and duck six pounds in the young. This unusual difference between the weight of duck and drake is one reason why the Muscovys are not so popular as market ducks. When dressed for market the difference between the two sexes is so marked that it is almost necessary to market each by itself. The drakes and ducks in the other varieties vary only a pound in weight. No weight is given for the White Call and the Black East India ducks, while the Indian Runner ducks, the latest aspirants for popular favor, are required to weigh four and one-half pounds and four pounds respectively.

The Pekin ducks have orange yellow bills and reddish orange shanks and toes. This, combined with their creamy white plumage, makes an attractive looking bird. If the bill or bean of the drake is marked with black it will disqualify him from competing in any show. All ducks intended for exhibition should be housed without crowding as a twisted wing, crooked back or decidedly wry tail will disqualify in any show. Neither the Pekin, Aylesbury nor White Call ducks may show any black on the bill or bean of the drake. It has been found advisable to permit the ducks of these breeds to have this bit of foreign color on their bills, as experience has proven that it is impossible to produce a duck of good size without this mark.

The male and female of the different varieties resemble each other closely in shape though they vary in size. The Pekin duck should be long and broad in body, full breasted with a deep well set keel and all sections finely rounded. The back is long and broad, with a slightly concave sweep from the shoulder to the tail. The neck of the drake is a little longer; but no thicker than that of the duck. Avoid selecting breeders that have a sleepy expression of the eyes, which should be bright and deep leaden blue in color. The indolent appearing duck is very apt to lack stamina and vigor.

The wings should be short, well folded and carried closely against the sides. The tails of both duck and drake are rather short, the curled sex feathers of the drake being rather hard and stiff. The thighs and shanks are short.

The Aylesbury ducks are decidedly popular in England, occupying somewhat the same position there that the modern Pekin ducks do in this country. They resemble the Pekins in shape and color, though their plumage must be a pure white, while the Pekin is creamy white. The bill of a typical Aylesbury is long and broad and should be pale flesh color, free from black. The eyes are full, the neck is long and slender and slightly curved. The back is long and broad and straight on top, being carried much more horizontally than that of the Pekin and the breast should be prominent and full. In England the Aylesbury have

been bred to such extremes in shape that typical show specimens have keel and breast practically dragging on the ground. Our duck fanciers do not favor this. The wings should be carried closely and smoothly against the sides. The thighs and shanks are short and strong, the shanks and toes being bright light orange.

In shape the Rouen duck somewhat resembles the Aylesbury, the back being carried nearly horizontal and the breast being full and carried low. The neck is long and slender and neatly arched. The tail is but slightly elevated and the feathers are hard and stiff, the sex feathers of the drake being well curled. It would be a difficult matter to paint a word picture of the plumage of the Rouen duck. The male and female differ very much. The head and neck of the male are a rich, lustrous green, the neck showing a distinct white ring around the lower part which does not quite meet in the back. The bill is greenish-yellow and the black bean at the tip does not disqualify in this breed. The eyes are dark brown. The upper part of the body should be ashy grey mixed with green and the lower part should be a lustrous green. The shoulders should be grey, finely streaked with brown wavy lines. The wings of a Rouen drake are beautiful, being greyish brown mixed with green and marked with a broad band of rich purple—showing a metallic luster—edged with white. The primaries are a dark brown. The breast of the drake is prettily colored also, a rich purplish brown being preferred. The general body color is steel grey, the feathers being crossed with fine pencilings of darker grey. The grey of the body grows

lighter near the vent, but ends in solid greenish black. The tail is ashy brown, the outer web in old birds being edged with white.

The female Rouen differs quite a good deal in color, the head being a deep brown marked with light tan stripes around the eyes. The bill is brownish orange with a dark blue blotch on the upper part of it and a black bean at the tip. The general color throughout should be a rich brown, distinctly marked or laced with a darker brown, which should be as free from a mossy appearance as

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possible. The wings should show a brilliant band of purple with a sharply defined edge as in the drake. The legs and toes of both drake and duck should be orange or orange brown. In awarding prizes the ducks that have the richest brown color and the best marking should win when other points are up to standard quality.

It is claimed that the Cayuga duck was first domesticated in the vicinity of Cayuga County, New York state. In color it should be a deep black, showing a lustrous green sheen, except the primaries of the duck, which sometimes are dark brown. The legs and feet of both drake and duck should be dark slate or black, the latter preferred. The tail should also be black. The Cayuga ducks resemble the Aylesburys though they are a pound lighter in weight, but the body is carried much more horizontally than that of the Pekin.

The Crested White ducks, while not so large as either the Pekin or Aylesbury, are a desirable duck, both for fancy and utility. Their bodies are round and plump and the plumage should be pure white. The head is adorned by a large well formed globular crest. The legs should be light orange and the bill yellow in color.

The Muscovy is another useful and quite popular breed of ducks. They were originally brought from South America where they have been under domestication for some time. They, however, show many of their wild traits in their manner of mating, nesting and roosting. The drake is almost a third larger than the duck and is a beautiful bird, especially the colored Muscovy drake. Unlike other ducks, they should have a red face which is a striking contrast to their plumage. In the white variety the shanks and toes are yellow, the bill is flesh color, the eyes blue and the plumage pure white. The red carbuncles which add to the appearance of the live bird detract from its value as a dressed market fowl.

The colored Muscovy ducks are black and white, some parts of the body showing a lustrous blue-black and other parts a lustrous greenish-black. The thighs may be white or black, though white is preferred. The shanks and toes vary from yellow to dark lead and the bill should be pinkish. In shape the head in both sexes is rather long. In the drake the head is large, the top being covered with long crest-like feathers which are elevated under excitement. The sides of the head and face are covered with carbuncles—the larger the better. The body is long and broad, the breast very full and the wings are long and stout. The tail is rather long with an abundance of stiff plumage. The body is carried nearly horizontal. To those who wish an ornamental as well as a useful duck the Muscovy is desirable. Their quiet disposition and the fact that they never quack like other ducks make them acceptable where other varieties would be an annoyance.

The Runner ducks have been gaining in popular favor because of their wonderful laying powers. Large flocks of them are being bred throughout the country. Though small the flesh is very fine in flavor and while they cannot be termed a rival of the Pekin, no doubt large numbers of them will continue to be

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marketed. In sections where duck eggs are liked for culinary use these ducks will be extremely popular. They originated in northern Europe where no particular attention was paid to their markings, the desire being to obtain a duck that would lay a large number of eggs. Since their importation into this country in 1895 by R. B. Dayton and the formation of a Standard for them we recognize only the fawn and white variety as standard bred. In color they should be light fawn and white. The head and neck should be white, marked with a fawn colored cap on top and fawn colored markings just below the eyes. A white line should divide the cap from the cheek markings and the base of the bill from the head markings. Each patch of fawn should be oval in shape and should join above the beak. The lower part of the neck, about half of the breast, the upper wings and the back should be fawn color. The lower extremities of the wings, the fluff and thighs should be white. The tail is light fawn or grey in the drake, being a trifle darker than the body color. The bill should be yellow, spotted with green when young, but marked with a black bean on the adult fowl. The shanks and toes should be orange red. The carriage is very erect and sprightly, their disposition is very active, their general conformation readily showing why they were named "Runners." The head is long and flat but finely formed. The bill is long but fairly broad and extends down from the skull in a direct line, which gives it a wedge-like appearance. The eyes are

set high in the skull and the neck is exceedingly long and slender in both sexes. The breast is round and full considering the size of the bird. The body is long and narrow, the wings of medium length. The legs also are of medium length and are set well apart.

The Blue Swedish duck not long ago was decidedly popular. It was imported from Germany in recent years, but undoubtedly originated in the country of the Swedes and because of its desirable qualities was imported by the Germans who crossed it with native ducks and produced the bird as it is today. In color they are mainly steel blue, although the head of the drake is dark blue, almost approaching black, with a green sheen. The duck's head is the same color as the body. The bill of the drake is greenish blue while that of the duck should be smutty brown with a dark brown blotch larger than that of the Rouen duck. The two main flight feathers are pure white. On the front part of the breast are pure white feathers which form a heart-shaped spot, about three by four inches in size, called the bib. It sometimes extends upwards to the lower mandible. The shanks and toes should be reddish brown or grayish black, but the former is preferred. The adult birds are one pound less in size than the Pekin duck, but the body is carried a little more horizontally.

The Grey and White Call ducks are sometimes called the bantam Rouen and the bantam Aylesbury ducks. The markings of the Grey Call are practically the same as those of the Rouen and in shape

they are small and compact, carrying the body nearly horizontal and possess a startled gamy appearance. The White Call ducks resemble the Grey in shape and size. The bill, shanks and toes should be bright yellow and the plumage pure white.

The Black East India duck may be classed among the ornamental varieties as it is decidedly small, though its body is long, while that of the Grey Call is short. Its plumage is a rich black throughout, but shows a greenish tint. The shanks and toes are black and the bill of the drake is a dark yellowish green, while that of the duck is nearly black.

For a more detailed description of these twelve varieties of ducks, we refer the reader to the American Standard of Perfection. As we said in the beginning, no one should endeavor to breed ducks to standard requirements without studying thoroughly the requirements of the American Standard of Perfection.

—Duck and Geese.

COTTON AND POULTRY

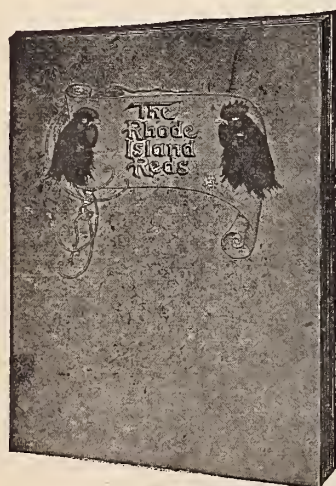
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SEPTEMBER AND OCTOBER POULTRY WORK

Important Period in the Handling of Growing Stock. Fall Colds and Their Treatment.

YOUNG pullets intended for winter layers should be given, so far as possible, free use of a large grass range through the month of September and should be fed liberally. They may be fed on the same ration as that used for laying stock. They should remain in the colony house until the latter part of September, unless the nights are very cold. Usually by October 1st they should occupy their permanent winter quarters in the laying and breeding house. Where open front quarters are used for housing breeders and layers, care must be taken to see that young pullets, when placed in them, use the roosts at night. If they are allowed to sleep on the floor they are liable to contract catarrhal colds.

Young stock are much more susceptible to colds than adult birds. The adult fowls should go into winter quarters at about the same time, usually housing them by the middle of September or by the first of October. Open-air, open-front quarters are best. Do not put too many birds in a flock, try to avoid crowding on the roosts at night, and do not allow young and old birds to sleep on the floor at this time.

Bear in mind that where a large flock is taken from a small colony house and placed in good sized laying house you are subjecting the birds to a very considerable change. Where they have been packed snugly and tightly in a small colony coop, they are often given roomy, airy quarters in the winter house, and colds result from the change. At other times they are packed too thickly into the laying house, through lack of sufficient housing capacity and are too tightly closed in, and colds result.

Try and lead up to fall and winter housing gradually by preventing crowding in colony coops through August and September, and then placing the birds in flocks of comfortable size in well aired or open front permanent quarters. See that they have an abundance of pure, fresh air to breathe at night and that they are not exposed to drafts about the roosts. Remember that fresh open air, supplied in a common sense manner, is certain to give entirely satisfactory results. Sleeping in the trees exposed to the heavy rains or roosting in drafty buildings with leaky roofs is not sane or sensible fresh-air poultry keeping, and is certain to produce disastrous results.

Both young and old stock ought to have the regular laying ration at least a month before housing. The early pullets should be laying by October 1st, and should be kept laying all winter. It is a common and satisfactory practice to mate up the breeding pens at the time when the birds are housed in winter quarters.

Treatment of Fall Colds

Catarrhal colds in the fall or winter will not cause any trouble if handled in a common sense manner. For best results the birds ought to be housed in

open-air quarters. When the colds first make their appearance as first indicated by sneezing, running of a thin mucus from the nostrils, bubbles in the corners of the eyes, the following treatment will often prove all that is necessary.

Drop twenty drops of spirits of camphor on a tablespoonful of sugar and dissolve the whole in a quart of drinking water, allowing the birds no other drink. When the birds go on the roost at night, rub a little vaseline in the eyes, nostrils, and press some in the cleft in the roof of the mouth. Often one treatment is all that is necessary. The vaseline treatment may be repeated as often as it is required. Should the colds persist, the following is a very satisfactory remedy:

Formula

Tincture of aconite, 10 drops; tincture of spongia, 10 drops; tincture of bryonia, 10 drops; alcohol sufficient to make one fluid ounce.

Mix and shake thoroughly.

Use a teaspoonful of this liquid in every quart of drinking water and allow the birds no other drink. Use also vaseline in the nostrils, eyes and cleft in the roof of the mouth.

Where the colds make themselves manifest by watery eyes and swelling or closing of one or both eyes, the following treatment will prove very effective. Obtain from your druggist a fresh 5 per cent. solution of protargol and a small glass "eye-dropper." Cleanse the eyes carefully with a little lukewarm water and carefully drop a few drops of 5 per cent. protargol into the affected eye, taking care not to touch the eye with the glass. Treatment should be given morning and night.

In the drinking water use ten drops of tincture of pulsatilla in each quart of water. Allow the birds no other drink. In simple cases, simply bathing the eyes once or twice daily and cleansing the mouth and eyes at the same time with 5 per cent. solution of boric acid in water will prove effective.

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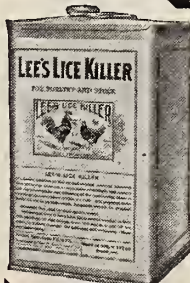
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QUESTIONS AND ANSWERS

EDITORIAL NOTE—This department will be devoted to answers to questions of general interest on practical poultry topics asked by subscribers and addressed to Editorial Department, AMERICAN POULTRY PUBLISHING COMPANY, Stafford Bldg., Buffalo, N. Y. Answers in this department are free of charge. Where two or more persons ask substantially the same questions, only one answer will be given. In asking questions try to send full information. The subscriber's name and address must be given [not for publication]. If a reply by mail is desired, be sure to enclose stamped addressed envelope.

Q. (a) Can you tell me how fresh beef scrap is prepared or how to prepare fresh cut bone so it will be like that you buy, as I can buy it cheaper fresh in large quantities? (b) Is it true that S. C. Buff Leghorns drop their eggs anywhere when running at large, and is it the same with R. C. Buff Leghorns? (c) Will you please tell me how to prevent hens laying soft shelled eggs, they are running at large, are hopper fed, several kinds of grit and oyster shell with cut clover mash once a day, what they will eat quickly? J. F. K., Warren, Ohio.

A. (a) Ordinary commercial beef scrap is the product of abattoirs and rendering works. The refuse meat is thoroughly cooked and all fat that can be extracted by pressure is removed. The meat cakes remaining are then ground and sold as beef scrap. A good, clean, sweet beef scrap is one of the most desirable meat foods for poultry obtainable at a reasonable cost. It will be difficult for you to preserve ordinary fresh butchers' scraps. Same may be cooked and dried, then ground, but they will not keep for any length of time. We know of no satisfactory way to keep fresh cut bone, as it heats very quickly and when spoiled is not fit to eat (b) There is no more reason why the varieties named should acquire such habit than any other breed. All fowls will steal their nests if given the opportunity to do so, and frequently pullets, when they first begin laying, will drop their eggs about the place. (c) The hens are probably overfat internally. Get them out on a good green range and give plenty of oyster shell and beef scrap. If you can obtain them feed crushed egg shells also.

Charcoal Apples.

Q. (a) Can poultry eat too much charcoal if in grit box all the time? have been told if they did eat too much it would dry up their blood. (b) Is it true if apples are fed occasionally it will hurt poultry? Mrs. C. W. F., West Roxbury, Mass.

A. (a) They will not eat charcoal enough to do them any harm. Where they have not had it before them for a long time they will frequently consume considerable quantities. Keep charcoal before the birds all the time, but also keep before them a supply of grit, oyster shell, beef scrap and pure water. (b) Waste apples are fed occasionally it will hurt the poultry.

Double Yolked Eggs.

Q. (a) What is the cause of hens laying eggs containing double yolks, otherwise eggs are all right? (b) Is it a fact that in young chickens the little pullets develop tail feathers earlier than the roosters, and can they be distinguished in this way when only a few weeks old? Mrs. W. C. R., Wyoming, Ohio.

A. (a) Double yolked eggs are the result of an abnormal condition of the

egg organs which, however, may be only temporary. If two equally well formed yolks enter the egg duct at the same time a double yolked egg may be formed. It is of frequent occurrence with prolific layers, particularly with large, fat old hens. (b) It depends a good deal upon the variety. In American and Asiatic varieties the little pullets as a rule show tail feathers before the cockerels. In the Mediterranean varieties the cockerels will frequently show greater tail development than the pullets.

Starting an Egg Farm.

Q. (a) In starting an egg farm which would be the best, to give all the hens range of an orchard in permanent houses, or divide the flock into small droves, of 20 to 30, and confine in runs? What I mean by range of an orchard is to build a fence around the entire orchard and build permanent houses in different parts, out give the hens range of the entire orchard. C. A. S., New Philadelphia, Ohio.

A. (a) With a large orchard we would prefer to build portable or movable colony houses similar to those that are used on the egg farms in Rhode Island, buildings 8 by 12 or 14, floor measurement, which are intended to accommodate from 30 to 40 birds. These build-



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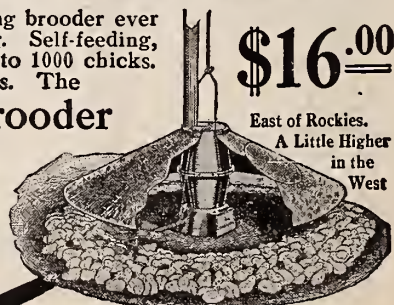
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ings are made so that they can be conveniently moved, whenever it is advisable to do so. With the buildings properly placed the fowls could be allowed free range of the orchard.

White Plymouth Rocks.

Q. What do you think of the White Plymouth Rocks as a fancy or show bird? From reading some articles on them I am at times inclined to think they are too easy to breed true to color, etc., for a fancy fowl. What is your opinion? The White Rocks are my favorite and I have owned a few for several years, but never have been situated where it would be profitable to breed for Standard and show room quality. However, I expect soon to get into it for business and would like a few pointers on the breed. My ideal is a flock of standard White Rocks that are also bred to egg basket and market qualities as well. If I can establish such a strain, is it your opinion that I could make them profitable in the southwest? Kindly give what information you can concerning the breed. J. E. W., San Angelo, Texas.

A. The White Plymouth Rocks are an excellent and very popular variety. As show birds you will find them hard enough to breed true to standard requirements. There is plenty of work even for the most exacting fancier to produce high grade specimens. The combination of chalk white plumage and yellow skin, yellow legs, yellow beak and bay eye is an exceedingly hard one to get and you will find your work cut for you if you intend to breed prize winners. Would advise you to get a Standard and study same carefully. Also join the White Plymouth Rock Club and learn what you can about the variety by associating yourself with other breeders.

Egg Eating Hens.

Q. Have you any cure for hens eating eggs except killing? G. E. A., St. John, Can.

A. When obtainable, feed dry crushed egg shells freely. If egg shells cannot be obtained in sufficient quantity keep a constant supply of crushed oyster shell or other similar seashell before the birds all the time. See that they are liberally supplied with green food, and either give two or three feedings a week of meat of green cut bone or keep beef scrap before them all the time. Provide dark nests, raised sufficiently high from the floor so that they will not be convenient places for the birds to scratch about on. Leave a few stone or glassware nest eggs lying about the coop for the birds to pick at. In a short time you will find that the egg eating will cease.

Washing Eggs for Market.

Q. (a) Explain why an egg should not be washed for market purposes? What difference would there be in time in the keeping of washed and unwashed eggs? (b) Can an experienced candler tell a washed egg from an unwashed one? (c) Would washing, allowing to dry without wiping, be a satisfactory way to clean eggs? A. G., Nankin, Ohio.

A. Washing an egg destroys the delicate outer coating of the shell and removes the so-called bloom of a fresh egg. Eggs when washed will not remain as long in good condition as eggs which have not been so treated. The exact difference in time has not to our knowledge been fully demonstrated. Soiled eggs should, however by all means be cleansed before they are sent to market, but it is best not to mix these in with perfectly clean, fresh eggs which require no washing. Use a cloth dampened in lukewarm water for removing dirt from

the surplus moisture the shells will be spotted and look dirty.

Feeding Questions.

Q. (a) Is the ration I am using for laying hens all right: 10 pounds of bran, 19 pounds corn meal, 10 pounds wheat middlings, 10 pounds ground oats, 10 pounds flax seed meal, 10 pounds bone and meat or green cut bone for morning mash with cut clover, night food, 1/2 bushel cracked corn, 1/2 bushel of wheat, 1/2 bushel of oats? I feed this all the year. I have White Leghorn chickens. In the morning I give 1 quart of mash, at night I give 1 1/2 quarts of feed in the straw to 18 hens. (b) Do you think it would make a good laying breed if I would take a White Leghorn hen and cross her with a White Wyandotte rooster, then after the first year cross them back again? (c) Is linseed meal a good food or is the flax seed meal the best to make hens milt quickly? A. M., Camden, N. J.

A. (a) We would prefer to make the mash equal parts by measure of bran, corn meal, wheat middlings and ground oats, and would not use over 5 pounds of the flax seed meal to 100 pounds of this mixture. Would add to the mash from 10 to 15 per cent. of cut clover. Would feed the ground bone, meat or green cut bone separately. (b) We do not think that you would gain anything by making the cross. If, however, you intend to make a cross, would cross White Leghorn male and Wyandotte female rather than use the heavier for the top cross. (c) Linseed meal and flax seed meal are the same except that in some sections the term, linseed meal, is applied only to meal from which the oil has been extracted or to ground oil cake, while the term, flax seed meal, is applied to the ground flax seed from which the oil has not been extracted. We should not care to feed it heavily. To encourage hens to molt quickly put them out on a grass range for two or three weeks and give but one meal a day of dry grain, allowing no other food, then remove them to the laying quarters and put them on the regular laying ration, keeping a free supply of beef scrap always before them, or feeding meat one full meal three times a week. As a rule, this will start the feathers to dropping quickly.

Hatching Minorca Eggs.

Q. My chickens are Minorcas. I have taken off two hatches from the incubator. Only about 50 per cent. of the eggs hatched, the lining of the egg shell being so tough that the chicken could not break it. The shell would, in most cases, burst all around, but the lining would have to be taken off of nearly all the eggs before the chick would get out. Many chickens died in the shell. Give the cause. Could it be too much oyster shell? D. H., Ardmore, Ind.

A. Do not believe that feeding oyster shell has anything to do with your conditions as reported. If you hatched 50 per cent. of all eggs set you are doing well and have no reason to complain. A certain percentage of chicks will always die in the shell, no matter how you hatch. In the majority of cases the trouble is due to weak germs from one cause or another. The most common cause of weak germs is faulty condition of the breeding stock. Carelessness in saving the eggs for hatching is also responsible for many losses from chickens dead in the shell. Frequently eggs are kept too long before setting them. The fresher eggs are when set the better and for best results they should never be kept longer than two weeks. While saving eggs they should be kept at a temperature not below 40 degrees nor above

egg shells. (b) Yes. (c) No. If you allow the eggs to dry without wiping off 60 degrees. Prolonged exposure below 40 or above 60 is almost certain to injure the germ or egg contents and result in chicks dead in the shell. The older an egg gets before being set the weaker the germ becomes. Changes also take place in the egg content which render it unfit for proper development of the chick.

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Single Mating and Double Mating.

Q. What is meant by single mating and double mating? J. A., Poughkeepsie, N. Y.

A. The terms are used chiefly by fanciers. A single mating is one where but one mating is necessary to produce both males and females of exhibition quality. Double mating is a practice adopted by fanciers to secure birds of exhibition color and shape of both sexes, usually in the parti-colored varieties, one mating being required to produce exhibition colored pullets and another to obtain exhibition colored cockerels. On fancy plants you will as a rule find that the proprietor has certain pens mated up to produce his exhibition cockerels and quite a different type of bird mated up to produce his exhibition pullets.

Wants Information Concerning Leghorns.

Q. I am getting some information about Leghorns. What percentage of Leghorn pullets sit? Two year old Leghorn hens? Reply to this either from records or from general information. J. R. A., Owensboro, Ky.

A. We have no records at hand showing what percentage of Leghorns develop the broody habit and we doubt if any authentic information can be had such as you require. It is, however, a fact that Leghorns, both young and old, will occasionally become broody, though not as frequently as birds of the American or Asiatic variety. On the majority of large poultry plants where Leghorns are carried, provision is always made for breaking up the broody ones so that the desire to sit must be more or less prevalent.

Black Leghorns.

Q. Why are the Black Leghorns not bred as extensively as the other Leghorn fowls? Are there any points about the Blacks which prevent them from becoming favorites with poultrymen either as utility or show birds? Are the laying qualities of the Blacks equal to the other types of Leghorns and are their eggs as large? Sumner, Racine, Wisc.

A. The Black Leghorns are an excellent variety and those who breed them claim that they are the equals in all respects to the other members of the Leghorn family. It is quite probable that the reason they are not being bred more extensively is the hot competition they meet with in the Black Minorcas which are also in the Mediterranean class. It is not unlike that the Minorca breeders have been more energetic in pushing their favorites because with the white varieties the White Leghorns seem to take precedence over the White Minorcas.

Concrete Poultry House.

Q. I have planned to build a poultry house about 15 by 60 feet with a concrete foundation about every two or three feet, iron reinforcements such as inch pipe. For the side wall I intend to use concrete six inches at bottom, four inches at top, walls six and nine feet high. The top of the wall I intend to connect the supporting pipes together, which will form excellent braces for the wall. Would these sweat if sufficient ventilation was given through a shaft in the roof? F. B. M., Liberty, Pa.

A. Should judge that such a house would be rather expensive to build. Aside from that there is no particular objection to it. Would not want to run a ventilating shaft to the roof. Ventilate by opening the windows wide and

substituting burlap screens for part of the upper sash of the windows. By thoroughly airing out the house and keeping it aired out both night and day you will have no trouble from dampness or house sweating.

Incubating Light and Dark Colored Eggs.

Q. (a) What good reason is there, if any, for the oft repeated advice not to incubate light and dark colored eggs of different sizes (within reasonable limits) together, presumably using either an incubator or a hen? (b) Is there reliable information regarding the hatchability of eggs laid and begun incubating the same day? It has been stated by responsible writers that such eggs will not hatch well. (c) If an egg breaks under a sitting hen, is it worth while to wash the smeared eggs?

A. (a) As a rule there is considerable difference between the fowls which produce light shelled eggs and those which produce dark shelled ones. There is quite a little difference in the character of the shell of the eggs. It is well known by incubator operators that the period of incubation in common fowls varies quite a little, some eggs hatching as early as the 19th day and some not until the 22nd. White eggs are commonly produced by the Mediterranean varieties from active birds whose eggs usually hatch in the minimum limit. Brown eggs are commonly produced by the American and Asiatic varieties or less active birds, and usually take the full 21 days incubation. Again, with the exception of Minorca eggs the white eggs as a rule run a little smaller than the dark shelled ones. You can readily see the disadvantages of having a mixed lot of eggs in a machine where the chicks in the white eggs might come out on the 19th and 20th days while those in the dark eggs were not ready to hatch until the full 21 days were up. The difference in the character and thickness of the shell is also a factor in incubation, which makes it advisable to incubate white shelled and dark shelled eggs separately. (b) We have not seen the statements to which you refer. For our own use we prefer to have eggs for hatching as fresh as we can get them, and frequently set eggs on the same day on which they were laid. (c) Yes. We always wash the smeared eggs if an egg is broken in the nest of a sitting hen and frequently get a good hatch from the remaining eggs. In setting heavy hens you will seldom have a hatch in which no eggs have been broken during the incubation period.

Poor Laying.

Q. I have 56 hens (Barred Rocks and S. C. White Leghorns) and two cocks. These are kept in a warm, dry house of modern construction. All of the above named hens are rather young and most of them about one year old. They are kept free from lice and other vermin. Before them at all times are beef scrap, pure water, sharp grit, and plaster for egg shells. They are fed in the morning with about three or four quarts of wheat or cracked corn and the same by night. Besides this they get about six quarts of scraps from the table. Now and then I feed them some charcoal which they like very much, and also some cabbage. They get potatoes and other vegetables in the table scraps from the house. They have a fairly large yard and are not overfat. They all seem to be in perfect health and I do not understand why they do not lay better. The following shows the number of eggs laid since January 1st by the 56 hens: January 214 eggs, February 273 eggs, March 590 and April 214. What is the matter and give me a good formula? Where can I obtain a reliable quotation on fancy eggs (retail) for Detroit? G. B. F., Detroit, Mich.

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A. The egg record is a poor one. Your birds apparently have had really more food than they could take care of and undoubtedly you will find them quite fat. From what you say should judge that they were probably immature when housed in the fall. Would suggest that you feed a mixture of equal parts wheat and cracked corn twice daily, allowing only medium sized handful to a bird at a feeding. Keep the beef scrap, grit, oyster shell and pure water always before them and feed some fresh, green food liberally. Give them raw potato parings or any other raw vegetables that you may have to spare, and as much of the table scraps as they will eat up and quickly for the noon feeding. You ought to be able to obtain retail quotations on fancy nearby eggs from some of the most reliable produce dealers in your city. The retail quotations are seldom given in the newspapers.

Breed for An Egg Farm.

Q. (a) What breed would you recommend for an egg farm and why? (b) Do you think straight hopper feeding for layers and breeders with limited range gives as good results or better than feeding in litter? (c) How would you arrange double runs, both in front or one in front and one in rear? (d) What is the cheapest way to protect houses with board floors against rats? A. N., Chicago.

A. (a) It would depend a good deal upon the location of the farm and the demand of the nearby markets, also upon the perference of the proprietor. Almost any of the American varieties can be depended upon to give satisfactory results where brown eggs are wanted. Some egg farmers prefer White Plymouth Rocks, others White Wyandottes, and in the egg farming community, known as the Little Compton district, Rhode Island, Rhode Island Reds are most in favor and are bred almost exclusively. The large egg farms which cater to New York city markets prefer White Leghorns because they are prolific layers of good sized, white eggs, which bring a premium in the New York City market. Properly handled, practically all of the popular varieties of domestic poultry can be depended upon to give a satisfactory egg yield, and there is really very little difference in the number of eggs produced. (b) A combination of the two is most satisfactory. (c) It would depend a good deal upon the lay of the land and the location of the plant. With other conditions favorable, runs may be satisfactorily placed on both sides of the building. (d) It is very difficult to keep rats out of houses having board floors and we know of no satisfactory way to protect such buildings against vermin. If you must have board floors have them high enough off the ground so that you can easily introduce a dog, that is a good rather, underneath the floor at regular intervals. Poultry houses have to be left open to allow the birds to go in and out, and this, of course, makes them easy of access for rats and mice.

Starting in the Poultry Business.

Q. (a) My husband and I have been raising poultry on a small scale for several years until we have reached a place where we think we have sufficient experience for branching out a little farther. He has worked in a shop and the poultry has been a side issue. Now there is a small place here of about 12 acres for sale cheap, perhaps a little more than two miles from Boston and Maine station and one mile from Vermont Central, so situated that the hens might

have free range without troubling neighbors. We have had trouble this spring in hatching, not so much with the fertility of the eggs as with the chicks being unable to get out of the shell. Now we feel that right here is the difficulty. Our breeding stock is too closely confined. The soil of this place is light and gravelly and we have been advised against buying it on this account. I would like to know what the chance of success on such a place would be, and is a good soil essential to success in poultry raising? (b) The place is well situated as far as being able to reach good markets. There are several small cities within easy distances and Boston can be easily reached. We have thought of combining the raising of small fruits with poultry keeping, such as strawberries and raspberries, to get a start. Perhaps you can judge better if I give you a little insight into our methods. We have made quite a success in getting eggs through the year and have kept strict account of income and outgo. I think eggs would form our main business, although we have a leaning toward fancy poultry and believe in the best. We breed White Wyandottes exclusively. Last fall to our surprise we won second and third cockerels at our local show in Northampton. We feel that we are infants in the business yet but are intensely interested in and studying to improve all the time. Mrs. F. W. H., North Amherst, Mass.


A. (a) Light, gravelly, well drained soil, if it will grow good grass will make a satisfactory poultry farm. Heavy soil is neither necessary nor desirable. In fact, heavy, clayey soil makes poor land for growing poultry but as a general rule land that will not grow grass is not desirable. (b) Your location ought to prove an excellent one and the combination of small fruits with poultry raising can be relied upon to give satisfactory results if properly conducted.

Clover—Beef Scrap—Shade.


Q. (a) How do you prepare clover for cutting? (b) Which is better, beef scraps or green cut bone? (c) What is a good poultry shade? I see seed advertised in your paper which claims to produce a shade in three weeks, is this any good? G. W. G., Parkhill, Ont.

A. (a) The clover should be cured so as to retain the green color and not

dried out enough to render the leaves brittle, so that they will easily be shaken off the stems. It should preferably be cured in the cock in a sheltered place or else dried under cover. It is cut in an ordinary clover cutter, such as are supplied by all dealers in agricultural implements. (b) Good green cut bone, if



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RFD 6

WEST NYACK, N. Y.



fresh and made from sweet, wholesome beef bones, is a very satisfactory animal food. It is, however, difficult to obtain a supply of wholesome material and requires considerable labor in the cutting, as it must be fresh ground when wanted. Bone after being cut heats quickly and spoils. Beef scrap is a highly concentrated dry meat food that with reasonable care will do well in almost any climate. When pure and wholesome, it is one of the best meat foods we have. (r) Shade of shrubbery of any sort is very satisfactory. Field corn makes good, quick shade if the birds are kept off it until the corn reaches a height of two feet. Fruit trees, particularly when cut back so as to grow rather low, afford excellent shade for the poultry yard and an additional source of profit. We have never had any experience with the seed to which you refer.

Mites

Q. Please tell me how to exterminate the mites. I have dipped all my fowls in Kresol dip with just a little kerosene added, rubbing until all feathers were saturated. Have torn out all nests and roosts and sprayed thoroughly, returning nest boxes after charring over sulphur and whitewashing. Put in entirely new roost, not touching building. Carted off all trash yet I find the tiny black things somewhere about my sitting hens. What shall I do to save my young fowls hatched under hens? I want none as seed for another year.

C. G., Higginsville, Mo.

A. Mites are easily exterminated if you go about it properly. Remember that the mites breed in the cracks and crevices about the poultry houses and not on the bodies of the fowls. They are veritable poultry bed bugs and attack the fowls when on the roosts and on the nests. When they are abundant in the poultry house they may be found on the fowls both day and night, but as a rule they only attack the birds when they are roosting or when they are on the nest. Old, soft pine boards that are full of cracks and crevices make favorable breeding places. Shingled houses are difficult to rid of these vermin because the pests will find snug harbor between the boards and shingles. This can be overcome by painting the shingles with a good cresote shingle stain or wood preservative. The fumes of the cresote will kill the mites. The interior of the house should be brushed free from dust and then thoroughly treated with good, hot whitewash containing an ounce of erude creolin to each bucket of wash. This is best put on with a spray pump throwing a coarse spray, applying it liberally and splashing it into all cracks of the building. The roosts and dropping boards should be treated with a good liquid lice paint at least once a month during the warm weather, applying the same early in the morning so that it will have a chance to dry in well before the birds go to roost. All nests should be thoroughly whitewashed inside and out and left in the sun until they are thoroughly dry.

Dust the hens thoroughly with a good lice powder or with insect powder or with insect powder before they are allowed to return to the coop after it has been renovated. Avoid using old straw for nesting material, as straw harbors mites. Only thorough work will get rid of them. If you have a pigeon loft on the place give it the same treatment, otherwise infested pigeons will carry the

mites into your poultry buildings. If you have reason to believe that the wood of your poultry buildings is full of mites burrow where the whitewash and disinfectants cannot reach them, remove all your birds from the house for a few days and fumigate thoroughly with plenty of burning sulphur, keeping the house stopped up tight while the sulphur is burning. All windows must be closed tightly and the doors and other openings made as tight as possible to prevent escape of the fumes. After the house has been thoroughly fumigated with sulphur it should be well aired before the birds are allowed to return to it. It is best to take the windows out and leave the doors open, leaving the house to air out thoroughly, for at least 24 hours before it is again used for fowls, otherwise the remaining sulphur fumes are liable to prove injurious.

Raising Guineas

Q. (a) How many guinea hens can be kept with one male bird for the eggs to prove fertile? (b) How old should the guinea chicks be before being fed? (c) What should they be fed upon the first few days and how often should they be fed? Will they do all right on the prepared chick food? (d) Is bran and chicken meal mixed together good for them? (e) Should drinking water be kept by them all the time? (f) Is an occasional drink of sweet skim milk good for them? (g) When they are hatched and raised with chicken hens, how long should they be kept in pens before allowed to run at large?

M. S., Monroeville, N. J.

A. (a) Three females to one male are enough. (b) Do not give them food

until they are 24 hours old. (c) Any of the standard ready-mixed chick foods will prove an excellent first food. (d) Guinea raisers say that any food that is good for young chickens is good for

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Frank McGrann, Prop.,

Hiram Demmy, Jr., Mgr.,
P. O. BOX 417

Lancaster, Pa.

young guineas, and Mr. Edgerton, proprietor of the Pioneer Guinea Farm, states that he has never found any wholesome food that appeared to disagree with them. (e) Yes. (f) Yes. (g) Better keep them confined close to the mother hen for the first two weeks, moving the run to new ground every few days.

Hatching Winter Layers

Q. (a) When is the best time to hatch Light Brahmas, Plymouth Rocks and Leghorn chickens for winter layers? Does the difference of breed make any material difference in time of development? (b) What is the best method for feeding young turkeys? Mrs. A. D. E., Mercer, Mo.

A. (a) Young turkeys should not be fed until they are 24 to 48 hours old. One of the most satisfactory foods is cottage cheese made from clabbered milk which is heated to separate the curd from the whey and then squeezed as dry as possible. This should be fed regularly with a little of the best quality ready mixed chick food. The poults should have a grass run with the mother hen but should not be allowed out until the dew is dried off. Running in wet grass is apt to prove fatal. Feed four times a day until they are three or four weeks old then give three feeds a day, gradually reducing the chick food and replacing it with wheat, kaffir corn and chick size cracked corn.

Off-colored Cockerel.

Q. I bought some Buff Orpington eggs at a fancy price and set the eggs and raised four chickens, one cock and three hens and the next year I set some of their eggs and got a Buff Orpington cockerel that on his neck and under feathers is a creamy color and three of his tail feathers are white, all of the top feathers except his tail are a fine buff color. Would you advise breeding him to a few pullets? T. S., Morristown, Tenn.

A. We would not breed the off-colored cockerel, as you will find the white very difficult to get rid of.

Brick Poultry House

Q. I intend to build a new poultry house and want to build it of brick. I think it would be very damp. What do you think of it? I want to make it 10 by 28 feet, divided into four pens, each pen containing twelve birds. Mrs. J. M., Chicago, Ill.

A. Why make the poultry house of brick? It will prove rather expensive building material. Properly constructed, however, there is no reason why the building should be damp. It should be made so that it can be thoroughly aired out by the windows in the south front. Do not think you have planned to make the building deep enough. Would not have it less than 12 to 14 feet deep and would not have the pens less than 8 or 10 feet wide.

Breeding From Cockerel

Q. (a) Would you advise breeding from cockerel (Barred Plymouth Rock) from nine to ten months old, and if so, to how many hens or pullets can he be bred with good results? (b) What is meant by cockerel and pullet matings in Barred Plymouth Rocks and how are they made? (c) Are the pullets from cockerel matings and the cockerels from pullet matings inferior and of improper color? To the average amateur the above terms are as Greek is to the average man. (d) Suppose your cocks and pullets are all of the proper shade, barring and shape laid down by the American Standard of Perfection, will the offspring be of exhibition quality? According to what I have read in catalogues of prominent breeders, they will not be.

A. (a) If he is strong, vigorous and well matured, breed him to good yearling or two-year-old hens. Twelve to fifteen hens are enough. (b) Cockerel and pul-

let matings are terms applied to the double mating system where one family or mating is required to produce standard colored cockerels, and another family or mating of the same variety to produce standard colored pullets. Roughly, in Barred Plymouth Rocks a good, strong colored, well barred, standard exhibition male mated to rather dark females is required for producing males of a desired color and shape, while a rather light-colored cockerel with standard colored females is used for obtaining satisfactory results in pullets. It is, however, essential that the birds used shall be line-bred in either cockerel or pullet matings according to results desired. You will find detailed information in our Plymouth Rock book which will be forwarded to your address on receipt of price, fifty cents. (c) The color and markings are usually such as to render them unfit for exhibition purposes, but the best specimens are desirable for breeding purposes. (d) A great deal depends upon what is back of the birds in the way of breeding. As a general rule the mating of such birds would lead to very unsatisfactory results. If you are going to breed Barred Plymouth Rocks or any other variety, get all the available authentic literature you can on the subject, and study up on breeding. To get best results with parti-colored birds you must use the double mating system, and this means that you require one strain or family for producing exhibition males and another for producing exhibition females.

The Best Breed

Q. What is the best breed for general utility bird? C. J. B., Sulphur, Ind. Ter.

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Spray **Conkey's Nox-i-cide** about the poultry houses and runs. Destroys germs and prevents disease. A hundred uses about the home as a disinfectant and cleanser too. 35c, 60c.

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A. There is no best breed for practical or utility purposes. Any of the leading standard breeds ought to give you satisfactory results, and the safest plan is for you to choose the variety which appeals most to your individual taste. For eggs and meat, the American varieties, like the Wyandottes, Plymouth Rocks and Rhode Island Reds, are the most popular where brown eggs and yellow skin are in demand. Where a good-sized, white-skinned bird is desired, the Orpingtons are much in favor. For exceptionally heavy roasters and capons, Light Brahmas are a popular variety and much in favor with market men. For the production of white eggs, Leghorns and Minorcas are most in favor.

Ventilating Poultry Houses

Q (a) How would you ventilate a house, 10 by 12, with two windows on south side which reach across the building, and a window and door on the east end? The walls and back plastered with 2-inch studding and then face plastered. Have a sand floor and a stove in the house for the little chicks on chilly or damp days. I have been ventilating this house with a lath door covered with burlap. Do you think this is right? (b) Do you think this house would be a good place for an incubator and what kind would you advise me to get? C. D. S., Rapid City, S. D.

A. The lath door covered with burlap ought to answer for ventilating purposes on exceedingly stormy, cold days or at night, but you had best arrange to keep a portion of the south front open during the day time. If the windows are not made so that they can be conveniently opened and shut, remove a portion of the upper part of the window and replace it with muslin. Use the common unbleached muslin and tack it loosely on to the frame. If you put it on too tight at first, it is liable to shrink when wet and pull away from the tacks. (b) We cannot advise you as to the kind of incubator to buy. You will have to decide that question for yourself after carefully studying the catalogues of the leading standard makes. If, after reading the advertising matter on the subject, you are still in doubt, confer with some friend who is operating a machine and who is successful. We do not believe that a house having so much glass in the south front would prove a satisfactory place for incubator operation. Better place the incubator in your house cellar.

Feeding "Butcher's Blood"

Q. We are raising White Wyandottes for eggs and roasters. We have a good supply of fresh butcher's blood at a very low cost. In what way would it give the best results in feeding and is there any way that we might dry this and preserve for future use? A. B. J., Spencer, W. Va.

A. We doubt if you can preserve the blood satisfactorily without special and expensive equipment. It would be necessary to thoroughly cook and evaporate the blood and afterwards kiln-dry it to get rid of all moisture. The best way to feed fresh blood is to cook it thoroughly and mix it with the moist mash food. Do not feed too heavily at first; begin with very little and gradually increase as the birds become accustomed to it. Six to eight per cent. of the entire mash ought to be sufficient as the maximum supply. If there is any tendency to the development of bowel trouble after beginning to use the blood, discontinue.

Establishing a Small Poultry Business.

Q. (a) In a small poultry business, 200 or 300 layers, would you think one of the American varieties, Rocks, Reds or Wyandottes, would be superior to the Light Brahmas? I have always been partial to Light Brahmas. (b) Could Brahmas be hopper fed grain, scrap and mash just as Mr. Ripp feeds his Reds? (c) Is it necessary to feed any mash? You write quite often about fowls not getting warm water in their natural state. They didn't get any mash then either, and I have always wanted to know what you feed. (d) If you are breeding for fancy market eggs, would you breed for high scores also? (e) Do you hopperfeed your young chicks from the start and have water before them all the time? (f) In a five-acre tract, part in orchard, would you use colony houses or long houses with double yards, or divide the ground into two yards and use colony houses on either side alternating summer and winter, summer being spent in the orchard? (g) Would you trap nest 200 layers? H. H., Sheridan, Wyo.

A. (a) I you intend to go in exclusively for eggs and meat you will probably find that one of the American varieties will give you more satisfactory results. Some strains of Brahmas, however, prove exceptionally fine layers and the equals of any of the American varieties. (b) They can be hopper fed satisfactorily and on many roaster farms where this breed is used exclusively both breeding and young stock is so fed. (c) No, moist mash is not necessary. You can get quite as satisfactory results without it. A mixture of two-thirds corn and one-third heavy white oats or good, sound, hard wheat makes a very satisfactory grain mixture. Feeding it to Brahmas, we should prefer to give a full feeding morning and night, allowing a fair-sized handful for each bird at a feeding. Would keep beef scrap, oyster shell, grit, charcoal and pure water always before them. Feed some green food or vegetables freely, giving them as much in the middle of the afternoon, or at noon as they will clean up during the balance of the day. The vegetables are best fed by placing them in a pocket made by tacking poultry wire against the side of the poultry house at convenient height for the birds. This keeps the food out of the dirt and gives them

an opportunity to clean it up without waste. (d) Until you become an experienced breeder you had better confine your efforts to keeping thoroughbred stock for strictly fancy market eggs. After you make a success of this branch of the business it will be time enough to start out for high scores. (e) Keep food and water always before them from the time they have their first feed. (f) Personally, we would prefer colony houses, and would divide the range so that they could run on it alternate seasons. If the colony houses are made on



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runners, so that they can be readily transferred from one part of the farm to another, it will be a great convenience in alternating crops and poultry and will do away with the necessity of a great deal of wire fencing. (g) Not unless we had a great deal of time at our disposal that we did not know what to do with. Select one or two flocks of your best birds for breeding purposes and trap nest these. The chief objection to the use of trap nests is the amount of time required to attend them.

Pheasants

Q. (a) Which would you suggest for an amateur to try, Golden, Ring Neck or Mongolian? (b) Do they require special feed or can they be fed the same as chickens? R. C. P., Delevan, N. Y.

A. (a) Choose the variety you like best. (b) If you intend to raise pheasants you had better get a book on the subject and carefully study feeding, mating, breeding and care of the young. They cannot be raised on the same food as chickens and require more care. The chief diet of young pheasants should be maggots, ant's eggs and green food. They should also have a limited supply of grain and some of the ready-mixed chick's food make a very satisfactory ration. We can supply the book, entitled "Pheasants" by Chic. L. Darlington, post-paid, on receipt of price, which is fifty cents.

Origin of Popular White Varieties.

Q. To settle a dispute, will you please give the origin of the White Plymouth Rocks, White Wyandottes and White Leghorns? J. W. D., Wellston, Tenn.

A. The original White Plymouth Rocks were undoubtedly true sports from the Barred variety. White Wyandottes first made their appearance as sports from open-laced Silver Wyandottes. The White Leghorns are a very old breed and many years ago, at least as early as 1853, Leghorn fowls were common in Italy and were found in many colors. In those days white specimens were common and when mated together were likely to throw chicks of almost any color, browns, blues, blacks and whites. The original stock is credited with coming from Leghorn, Italy, and has been bred up to its present standard excellence by careful selection of the best white specimens.

CORN LARGELY USED AS FEED FOR LAYING HENS.

"In Ohio, corn under usual market conditions is one of the most economical feeds for laying hens, and can well be used to a very large extent in their ration. However, corn

must be supplemented with a nitrogenous feed, such as meat scrap or skimmilk, if good results are to be obtained from its use," says W. J. Buss, poultry husbandman of the Ohio Experiment Station, in the June Monthly Bulletin. Recent experiments at this station show that hens fed a ration composed of 87.2 per cent. corn and 12.8 per cent. meat scrap produced eggs cheaper than hens given a greater number of feeds.

Hens given corn, wheat, oats, bran, middlings, oilmeal and meat scrap ate more feed, but the increase in egg production was not sufficient to pay for the additional food consumed and for the higher cost per pound of this variety ration. In one test they produced 8.4 per cent. more eggs, but the feed cost per dozen eggs produced was 27 per cent. more than that of hens fed only corn and meat scrap.

DRY VS. WET FEEDS.

Dry feeds are the most convenient and they are less liable to be wasted or become sour. A wet mash is more easily digested than dry feed and it will hasten the growth and maturity of chickens. Fowls or chickens will fill up with a dough after they have refused to eat any more dry feed. Those intended for market will be ready sooner if given one meal a day of wet mash, preferably just before they go to roost.

The best time of the day to feed wet mash or dough is the latter part of the afternoon as the final meal before the fowls go to roost. Wet mash with some meat in it is generally palatable, and both fowls and chicks will fill their crops full of it. The moist dough coming in contact with the day's accumulations in the crop softens the mass, hastens digestion, stimulates the action of the bowels so that the larger part of the droppings will be deposited on the boards under the roosts during the night.

BULKY FOOD

The feeding of bulk rather than concentrated nutrients is designed to satisfy the appetite and not overtax the digestive organs. There is no especial benefit for a hen to have a very large crop, although she uses it as a receptacle to retain food until such time as her system requires it. If we expect a hen to lay an egg every twenty-four hours, her daily gatherings must contain sufficient nutriment to make the egg and at the same time sustain the wear and tear of her body.

SPROUTED OATS

To sprout oats during cold weather, one must have a warm room or use an oat sprouter with artificial heat. The oats are first wet up with warm water, temperature 90 to 95 degrees. After soaking them in warm water for 48 hours, spread them out one inch deep in shallow boxes, stir them daily and keep them wet with luke warm water until they begin to sprout. Cover with wet sacking to prevent too rapid evaporation. As soon as the sprouts appear, they should be kept wet but not otherwise disturbed. When the blades are two and one-half inches in length, they are ready to feed, greens, grains, hulls and roots. If well sprouted and free from mould, they are good for all ages of poultry.

Send A. P. W. to some friend or acquaintance interested in poultry. Five 2 cent stamps pays for a four month's subscription.

***We would like readers suggestions on how we can improve A. P. W.



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A fine lot of yearling males and females at sacrifice prices for quick orders. This is a great chance for you to get some of my CELEBRATED WINNING AND LAYING STRAIN at a low cost. Write your wants.

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For the past twenty years I have been winning the best prizes at the best shows. I have the best male line in the world today. My recent Boston winnings, January 1916, 1st and 5th cocks, 3rd and 6th hens, 1st cockerel, 3rd pen, shape and color and cup for championship male on 1st cockerel. Stock and eggs for sale. Satisfaction guaranteed.

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R. No. 6,

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Every effort will be made to make it the largest and best Poultry and Pigeon Show in America. It will be held in one of the largest and most modern Poultry buildings. Plenty of room. Strictly sanitary. Abundance of light. Empire coops. Expert Judges- Experienced employees. Liberal Prizes. Fair treatment to all and favors to none. Hagerstown has made many reputations in the Poultry World and will make yours. Entries open to the world. Entries positively closed October 5th. 1916. Write for premium list to E. P. Eyler, Gen'l Sec., Hagerstown, Md.

CHAS. B. FUNK, Supt. Pigeon Dept.

H. K. BEACHLEY, Gen'l Supt. Poultry Dept.

POULTRY SHOW DATES

1916

1917

Under this heading, we shall endeavor to publish a complete list of the shows to occur during the season of 1916-17. Secretaries should favor us with dates selected, names of judges, also correct any errors that appear in the dates published.

Aug. 22 to 25.—Middletown, N. Y. Orange County Fair.

Aug. 30 to Sept. 9—Toronto National.

Sept. 2 to 9—Cleveland Fair, Ohio.

Sept. 2 to 10—Sacramento, Calif., State Fair.

Sept. 4 to 13—Detroit, Michigan, State Fair.

Sept. 12 to 15—Hanover, Pa., Hanover Fair.

Sept. 12 to 16—Syracuse, N. Y., New York State Fair.

Sept. 18 to 23—North Yakima, Washington, State Fair.

Sept. 19 to 26—Allentown Fair, Pa.

Sept. 24 to 30—Memphis, Tenn., Tri-State Fair.

Sept. 25 to 29—Trenton Inter-State Fair, N. J.

Sept. 26 to 29—Lancaster Fair, Pa.

Oct. 3 to 7—Rocky Mount, N. C.

Oct. 3 to 6—Brockton, Mass.

Oct. 10 to 14—Hagerstown, Md., Hagerstown Fair.

Oct. 11 to 14—San Jose, Calif.

Oct. 17 to 21—Atlanta, Ga., Southeastern Fair.

Oct. 31 to Nov. 2—Spartanburg, S. C.

Oct. 23 to 28—Americus, Ga.

Oct. 23 to 28—Asbury Park, N. J.

Nov. 4 to 10—Macon, Ga., Georgia State Fair.

Nov. 13 to 18—Augusta, Ga.

Nov. 14 to 16—Greenville, S. C.

Nov. 15 to 18—Coalinga, Calif.

Nov. 18 to Dec. 2—Elizabeth, N. J., State Show.

Nov. 20 to 25—Owenboro, Ky.

Nov. 21 to 25—Paterson, N. J.

Nov. 22 to 24—Holyoke, Mass.

Nov. 22 to 25—New London, Conn.

Nov. 23 to 25—Pawtucket, R. I.

Nov. 24 to 30—St. Louis, Mo.

Nov. 28 to Dec. 2—Canton, Ohio.

Nov. 29 to Dec. 2—Attleboro, Mass.

Nov. 29 to Dec. 3—Oakland, Calif.

Nov. 29 to Dec. 3—Quincy, Ill.

Dec. 1 to 5—San Francisco, Calif.

Dec. 1 to 6—Guelph, Canada, The Ontario Show.

Dec. 2 to 9—San Diego, Calif.

Dec. 4 to 8—Vancouver, B. C.

Dec. 4 to 8—Hillsdale, Mich.

Dec. 4 to 9—Milledgeville, Ill.

Dec. 4 to 9—Wheatland, Indiana.

Dec. 4 to 9—Lanark, Ill.

Dec. 4 to 9—Portland, Oregon.

Dec. 5 to 9—St. Joseph, Mo.

Dec. 5 to 9—Amarillo, Texas.

Dec. 5 to 9—Providence, R. I.

Dec. 5 to 9—New York, The Palace Show.

Dec. 5 to 10—La Crosse, Wis.

Dec. 6 to 9—Gadsden, Alabama.

Dec. 6 to 9—Manayunk, Phil., Pa.

Dec. 6 to 9—Kentztown, Pa.

Dec. 6 to 9—Modest's, Calif.

Dec. 6 to 10—Terre Haute, Ind.

Dec. 7 to 12—Battle Creek, Mich.

Dec. 9 to 13—Titusville, Pa.

Dec. 10 to 16—Seattle, Wash.

Dec. 11 to 16—Zanesville, Ohio.

Dec. 11 to 16—Macomb, Ill.

Dec. 11 to 16—Buffalo, N. Y.

Dec. 12 to 15—St. Catharine's, Ontario, Canada.

Dec. 12 to 15—Calgary, Alberta, Canada.

Dec. 12 to 16—Orange, Calif.

Dec. 12 to 16—Easton, Pa.

Dec. 12 to 16—Streator, Ill.

Dec. 13 to 16—Alexandra, La.

Dec. 13 to 16—Milford, Mass.

Dec. 13 to 18—Chicago, Ill., Coliseum Show.

Dec. 14 to 17—Fond du Lac, Wis.

Dec. 14 to 20—Beloit, Wis.

Dec. 18 to 23—Belvidere, Ill.

Dec. 19 to 23—Olympia, Wash.

Dec. 20 to 23—Woonsocket, R. I.

Dec. 20 to 23—Holland, Mich.

Dec. 21 to 23—Millville, N. J.

Dec. 26 to 29—Batavia, Ill.

Dec. 26 to 30—Springfield, Mo.

Dec. 26 to 30—Tacoma, Wash.

Dec. 27 to 29—Brockville, Canada.

Dec. 27 to 30—Dayton, Washington.

Dec. 28 to 30—Ada, Okla.

Dec. 28 to Jan. 3, 1917—Springfield, Ill.

Dec. 29 to Jan. 3—New York, Madison Square Garden.

1917

Jan. 1 to 5—Hutchinson, Kan.

Jan. 1 to 6—Frankfort, Indiana.

Jan. 1 to 6—Aurora, Ill.

Jan. 2 to 5—Union City, Pa.

Jan. 2 to 6—Kalamazoo, Mich.

Jan. 2 to 6—Bellingham, Wash.

Jan. 2 to 7—Lancaster, Ohio.

Jan. 2 to 9—Los Angeles, Calif.

Jan. 3 to 7—Sheboygan, Wis.

Jan. 3 to 7—Oak Harbor, Mich.

Jan. 4 to 7—Fond du Lac, Wis.

Jan. 4 to 9—Dubuque, Iowa.

Jan. 8 to 13—Kansas City, Mo.

Jan. 8 to 13—Johnstown, Pa.

Jan. 8 to 13—DeKalb, Ill.

Jan. 8 to 13—Boise, Idaho.

Jan. 8 to 13—Walla Walla, Washington.

Jan. 8 to 13—Rockford, Ill.

Jan. 8 to 13—Anderson, Ind.

Jan. 8 to 14—Evansville, Ind.

Jan. 8 to 14—Galesburg, Ill.

Jan. 8 to 16—Racine, Wis.

Jan. 9 to 13—Wauseon, Ohio.

Jan. 9 to 13—Wauseon, Ohio.

Jan. 9 to 13—Norfolk, Va.

Jan. 9 to 13—Boston, Mass.

Jan. 9 to 15—Sparta, Wis.

Jan. 10 to 13—Colfax, Wash.

Jan. 10 to 14—Appleton, Wis.

Jan. 10 to 16—Chicago, Ill.

Jan. 15 to 20—Kalispeil, Montana, State Show.

Jan. 15 to 20—Oklahoma City, Okla.

Jan. 16 to 19—San Bernardino, Calif.

Jan. 16 to 20—Greenfield, Ind.

Jan. 16 to 20—Pittsburgh, Pa.

Jan. 16 to 20—Pontiac, Mich.

Jan. 16 to 19—Eau Claire, Wis.

Jan. 16 to 20—Grand Rapids, Mich.

Jan. 17 to 21—Port Wayne, Ind.

Jan. 18 to 21—Green Bay, Wis.

Jan. 24 to 27—Oil City, Pa.
Jan. 22 to 26—Pasadena, Calif.
Jan. 24 to 26—Palouse, Wash.
Jan. 31 to Feb. 3—Waukesha, Wis.
Feb. 1 to 6—Duluth, Minn.
Feb. 14 to 17—Sault Ste Marie, Mich.

F. G. Cook, Superintendent of Grove Hill Poultry Yards, Waltham, Mass., writes that having secured their annual crop of chicks, they are going to offer for sale some of the breeders from the pens that they have used this season. In a few instances they are willing to sell the entire pen, which is a splendid opportunity for some one to buy a pen of high-class Barred Plymouth Rocks or S. C. Brown Leghorns mated for best results. It would pay to set the eggs and give the young chicks particular attention to insure their rapid growth. They have a few utility Barred Plymouth Rock pullets that they can spare. Mr. Cook writes further that he is much pleased with the quality of the young Barred Rock and Brown Leghorn chicks. Full particulars in regard to these birds can be obtained by writing to Grove Hill Poultry Yards, Box 804, Waltham, Mass.

NORTH CAROLINA OFFERS FOUR-YEAR POULTRY COURSE

A four-year course in poultry science has been added to the short courses in poultry at North Carolina Agricultural College. The year just finished shows that during the past College year thirteen classes were taught, with a total of 229 students and a total of 8,412 student hours. During the year previous there were but eight classes, 77 students and a total of 938 student hours. The new unit-system house, started last year, is nearing completion and new equipment will be added.

***We would like readers suggestions on how we can improve A. P. W.

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that will save its cost several times a year and will furnish one to two bushels per hour of fresh ground corn, oats, peas, dry bone, oyster shells, nut shells, dry stale bread, etc., for poultry feed, or will grind table meal for family use.

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FRANK C. COLE, Poultry Judge,

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STATE FAIRS AND EXPOSITIONS FOR 1916

Name of Fair	Place	Date	Secretary
Alabama State Fair	Birmingham	Oct. 5-14	F. H. Fowlkes
Am. Royal Live Stock Show	Kansas City, Mo.	Oct. 2-7	W. H. Weer
Alabama State Exposition	Montgomery	Oct. 23-28	Geo. T. Barnes
Arkansas State Fair	Hot Springs		
California State Fair	Sacramento	Sept. 2-9	Chas. W. Paine
Georgia State Fair	Macon	Nov. 2-11	Harry G. Robert
Gem State Fair	Boise City, Idaho	Sept. 25-30	O. P. Hendershot
Illinois State Fair	Springfield	Sept. 15-23	B. M. Davison
Indiana State Fair	Indianapolis	Sept. 4-8	Chas. Downing
Iowa State Fair	Des Moines	Aug. 23-Sept. 1	A. R. Corey
Interstate Live Stock Fair	Sioux City, Ia.	Sept. 18-23	Joe Morton
Interstate Fair Ass'n.	Trenton, N. J.	Sept. 25-29	M. R. Margerum
Kansas State Fair	Hutchinson	Sept. 16-23	A. L. Sponsler
Kansas State Fair Ass'n.	Topeka	Sept. 11-16	Phil Eastman
Kentucky State Fair	Louisville	Sept. 11-16	W. J. Gooch
Kankakee Interstate Fair	Kankakee, Ill.	Sept. 4-9	Len Small
Louisiana State Fair	Shreveport	Nov. 1-6	L. N. Brueggerhoff
Minnesota State Fair	Hamline	Sept. 4-9	J. C. Simpson
Michigan State Fair	Detroit	Sept. 4-13	G. W. Dickinson
Mississippi State Fair	Jackson	Oct. 23-28	Mable L. Stire
Mississippi-Alabama Fair	Meridian, Miss.	Oct. 16-21	A. H. George
Missouri State Fair	Sedalia	Sept. 23-30	E. T. Major
Montana State Fair	Helena	Sept. 25-30	P. B. Snelson
Memphis Tri-State Fair	Memphis, Tenn.	Sept. 24-Oct. 3	Frank D. Fuller
Nat'l Western Stock Show	Denver, Colo.	Jan. 20-27, 1917	Fred P. Johnson
Nat'l Feeders and Breeders Show	Fr. Worth, Texas	March 13-18	Ed. R. Henry
Nebraska State Fair	Lincoln	Sept. 4-9	W. R. Mellor
New York State Fair	Syracuse	Sept. 11-16	Albert E. Brown
New State Fair	Muskogee, Okla.		
Ohio State Fair	Columbus	Aug. 28-Sept. 1	G. A. Stauffer
Oklahoma State Fair	Oklahoma City	Sept. 23-30	I. S. Mahan
Oregon State Fair	Salem	Sept. 25-30	A. H. Lea
Quebec Provincial Exposition	Quebec, Canada	Aug. 28-Sept. 2	Georges-Morrisset
Rochester Exposition	Rochester, N. Y.	Sept. 4-9	Edgar F. Edwards
Spokane Interstate Fair	Spokane, Wash.	Sept. 4-9	Edith Jones
South Dakota State Fair	Huron	Sept. 11-15	C. N. McIlvaine
South Texas Fair Ass'n	Beaumont	Nov. 10-18	C. R. Bone
State Fair of Texas	Dallas	Oct. 14-29	W. H. Stratton
St. Louis Agrl. Fair	St. Louis, Mo.	Oct. 2-7	John T. Stinson
Southeastern Fair Ass'n.	Atlanta, Ga.	Oct. 14-21	B. M. Striplin
Tennessee State Fair	Nashville	Sept. 18-23	J. W. Russwurm
Texas Cotton Palace Ass'n.	Waco	Nov. 4-19	S. N. Mayfield
Utah State Fair	Salt Lake City	Oct. 2-7	Horace S. Ensign
Vermont State Fair	White River Jct.	Sept. 12-15	F. L. Davis
Wisconsin State Fair	Milwaukee	Sept. 11-15	O. E. Remey
Wyoming State Fair	Douglas	Sept. 26-30	A. Highby

COWPEAS FOR CHICKENS

F. W. Kazmeier, Poultry Husbandman of the Extension Service of the A. and M. College of Texas, says cowpeas are a very desirable feed for laying hens. Some times they will not eat them very readily, in which case the peas may be fed ground in a dry mash. However, after a while they will begin to eat peas greedily, in which case care must be exercised not to feed them too freely. Never feed more than 15 per cent of the ration in cowpeas, as they are very rich in protein.

PARKS BRED TO LAY BARRED PLYMOUTH ROCKS.

J. W. Parks, Box W, Altoona, Pa., breeder of Parks Bred To Lay Strain Barred Plymouth Rocks, advises us that his strain is establishing exceptional egg records this season. A pen entered in the Missouri Egg Laying Contest is only a few eggs back of the leaders. Mr. Parks will send an interesting stock circular to readers who are interested in eggs and how to get them. When writing please mention A. P. W.

VIRGINIA STATE FAIR

This Fall Poultry Exhibit is a good one always and the coming exhibition Oct. 9th to 14th gives promise of being the greatest ever. Richmond always is at her best Fair week and with the grounds open Night and Day thousands visit all departments of the Fair. Write C. T. Riddick, Box 258 for Premium List. This season the Virginia Poultry Ass'n and the A. P. A. Branch will join in one mammoth State Exhibit. Something to think of brother fanciers.

ENDORSES "OCULUM"

I have fed "OCULUM" to my hens with great success. Last winter, I had 12 Barred Rock hens—was only getting 1 and 2 eggs a day. Fed "OCULUM" according to directions and on the 5th day, I got 5 eggs—7th day 10 eggs and have been getting from 7 to 12 eggs per day ever since.

Yours truly,

H. L. CARPENTER.

ATTENTION, POULTRY SHOW SECRETARIES

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For forty years the Axford has stood the test and has a reputation second to none in artificial incubation. The original sand tray incubator supplies proper moisture to eggs. Simple and safe lamp. Oil supply always in sight. Will last a lifetime with good care. Round, no cold corners. Write for catalogue.

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I must reduce my stock of breeding birds and am going to sell at \$2.00, \$3.00, \$5.00 and \$10.00 birds worth three times the money. Just the right time to get breeders from which to get show birds for the winter shows. This is your opportunity—grab it while you can. Everything on approval and money back if you do not like it. Baby chicks and month old chicks also.

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WESTERN POULTRY JOURNAL is devoted to the up-building of the poultry industry and is a recognized leader in its field. Its contributors are those who have made a success of and know the "ups" and "downs" of the poultry business and they tell of their experiences in a manner that is both inspiring and educational. It enjoys a wide circulation and is published in Iowa, in the heart of the section of the middle west that is rapidly making poultry history. Edited and published by E. E. Richards. Subscription price, 50c per year.

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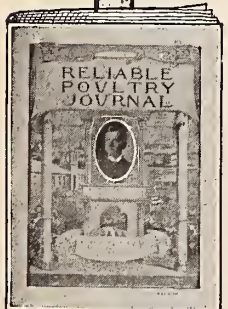
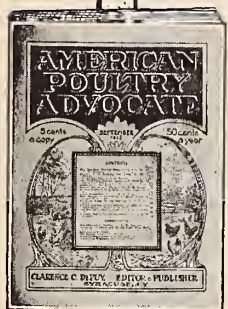
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A.P.W.

THE COMMUNITY EGG CIRCLE

Note.—The following suggestions relating to co-operation between egg producers were prepared by C. E. Basset, Specialist in co-operative organization, and W. H. Kerr, Investigator in Market Business Practice. They were published in United States Farmers' Bulletin 1656.

When it is estimated that the annual production of poultry and eggs in the United States is in excess of \$600,000,000—equal to the value of the hay or wheat crop—and when it is estimated that there is a total loss of nearly 8 per cent. of the eggs marketed, the importance of this subject is evident.

This great loss is due largely to improper handling between the farm and the market. Most farmers look upon eggs as a by-product, and the returns so much gain. The hens forage for a living, eggs are gathered when convenient and kept almost anywhere. With such carelessness and a combination of mongrel stock, dirty nests, stolen nests of broody hens, unconfined males, late maturing pullets and other undesirable conditions, is it any wonder that the product includes such a high percentage of small, cracked, dirty, stale, heated, and even rotten eggs?

Occasionally the accumulations of all these kinds of eggs are taken to the country merchants and exchanged for merchandise. The merchant usually buys these eggs "case count," paying the same price for all kinds and sizes, provided they are eggs with an unbroken shell. Small production results in small or infrequent shipments.

Many of these losses can be prevented by:

Remedies

- Selecting pure breeds that lay more and larger eggs, such as the White Leghorns, Wyandottes, Plymouth Rocks, Rhode Island Reds, Orpingtons, etc.
- Giving better care, food, and shelter, with dry, clean, vermin-proof nests.
- Confining males except in breeding season.
- Collecting eggs frequently, especially in hot or muggy weather.
- Storing eggs in a dry, clean, cool place.
- Using small and dirty eggs at home.
- Marketing frequently, with protection at all times from heat.
- Selling for cash on a basis of size and quality, "loss off" instead of "case count."
- Using an attractive package.
- Combining shipments as a matter of economy.

Co-operative Marketing

By uniting several egg producers in an association more can be accomplished in these essentials. One very successful egg company has a large incubator house with a 12,000 egg capacity, where early chicks are produced for the members at a low cost. This is done in order to obtain early maturing pullets, thus securing eggs during the fall, when eggs are usually scarce. The company also has a receiving room for eggs where they are candled, sorted to weight (about 24 ounces to the dozen), packed in cartons, and shipped on contract orders. Their eggs are all guaranteed to be according to grade, they advertise the fancy grades on their cartons and cases,

and market prices are paid to the members. Twice a year dividends are paid each member in proportion to the amount of eggs marketed through the company and the time of year eggs were brought in, a larger dividend being paid per dozen for eggs brought in during the fall and winter than for those brought in during the spring and summer, estimated by months. A regular trade is established with discriminating con-

sumers, with city clubs, with the best class of hotels and restaurants, and with fancy grocers for a supply each day or week.

The reputation thus established enables this association to fix its price at several cents per dozen above the regular market quotations, as fancy trade is willing to pay a premium for a guaranteed article. Most egg circles co-operate in buying their chicken feed and other poultry supplies.

Attractive Package

All food products should be delivered in a clean, attractive package. Some of the most successful egg shippers have discarded the dirty wooden case and are using a heavy fiber-board case, which will hold from 15 to 30 pasteboard cartons. Each carton has compartments for 12 eggs. Upon both the cartons and the case can be printed such advertising as may be wished. This style of package is especially desirable for the fancy retail grocer who can have his firm name included in the advertising. The fiber-board case is not expensive, forms a good protection to the eggs in shipping, and is worthy of trial.

Marketing by Parcel Post

With a firm container, parcel post can be used for small shipments to private homes within first and second zones; that is, 150 miles. Each egg should be wrapped in paper to hold it snugly on end, in its own individual compartment of the container, so that it has no play; and after the container is closed it should be securely wrapped in strong wrapping paper and tied with coarse strong cord.

Marketing Through the Creamery

Where there is a successful creamery established in the neighborhood, eggs can be delivered to it with the cream or milk. Creamery officials can often work up a fancy trade with those who buy the butter. Marketing through the creamery has been very successful.

Organizing the Circle

The following forms are offered as aids in organizing, managing, and auditing a community cooperative egg circle

or association. They are subject to such changes as will make them best adapted to the local conditions.

While at first the number of eggs to be marketed may not warrant a central station, with a manager to inspect, grade, and market the whole product, the aim should be to develop to that state. It is the only way to secure a uniform grade, which will attract the highest class of trade.

Preliminary Agreement.

We, the undersigned, citizens of..... County, State of....., do hereby agree to form ourselves into an association, to be known as the..... Egg Circle, and agree to abide by the rules for the conduct of the business which may be adopted by a majority of the members in regular session.

Name	Address	Number of hens kept.

CONSTITUTION.

Article 1.—Name.

The name of this association shall be..... Egg Circle and its place of business shall be at.....

Article 2.—Objects.

The objects shall be to secure and improve better strains of poultry; to produce more eggs of good color and size; to handle eggs more carefully in order to avoid waste; to pack a uniform grade of clean, fresh eggs, in order to be able to guarantee them and thus create a reputation; to market same

\$2.50 for 25 to 50 CHICK HOVER

Made of Galvanized Steel. Can be used in any box. Safe and durable. Hot water heat. All complete. Incubator book free. We make 73 different articles.



WENDELL INCUBATOR CO., Holly, Mich.

A feed for every age of chick. Ask us for samples of

H-O POULTRY FEEDS

THE H-O COMPANY
Mills,
Buffalo, N. Y.

JOHN J. CAMPBELL
General Sales Agent
Hartford, Conn.

\$9.85 BUYS BOTH
155 EGG INCUBATOR
CHICK BROODER
 California Redwood, Hundreds of Dead Air Cells. Catalog free
PROGRESSIVE INCUBATOR CO., Box 191 Racine, Wis.

Andrews' White Wyandottes

Win great victory at Boston, 1916. Best Display. Eggs for hatching from matings headed by all these winners. Send for mating list.
J. W. ANDREWS, Box W, DIGHTON, MASS

A Winning Combination

American Poultry World

and

Everybody's Poultry Magazine

Both One Year for 75c.

Or better still we will send you the above two papers together with your own selection of any 50 cent Poultry Journal published in the United States.

The Three One Year for **\$1.00**

Don't delay. Send today, this great offer may not appear again.

(Canadian subscribers add 25c additional for each paper wanted.)

Address All Orders.

AMERICAN POULTRY WORLD

BUFFALO, N. Y.

more directly to the consumers; to purchase supplies in a cooperative way, and to do such other things as may prove of benefit to the members and the community.

Article 3.—Officers.

The officers of the circle shall be a president, vice-president, secretary-treasurer, and two trustees, the five to constitute a board of managers. They shall be elected at the regular annual meeting, to be held on the second Monday in January of each year and they shall serve one year or until their successors are elected.

Article 4.—Duties of Officers.

The officers shall perform the usual duties connected with their several offices. Unless the board of managers elects a manager, the secretary-treasurer shall act as manager, and, in addition to keeping all records, shall have charge of the buying of all supplies; the collecting, inspecting, grading, and packing of the eggs; the securing of orders from the most profitable class of customers (such as first-class hotels, restaurants, and private trade); the making of all shipments and collecting of accounts, settling with all members on the same basis for the same class of eggs.

The manager shall give a bond in twice the sum that he is liable to handle at any one time, the cost of said bond to be paid for by the circle. He shall keep a careful account and record of all money transactions, which account shall be inspected and audited not less than once in each three months by two competent persons, with a yearly audit just before the annual meeting, the report to be made in writing to said annual meeting.

Article 5.—Membership.

Any person may become a member of this circle by paying the annual fee of \$1 and agreeing to live up to the rules of the circle.

Article 6.—Voting.

Any member in good standing shall be entitled to cast one vote at any meeting of the circle, but no proxies shall be allowed.

Article 7.—Amendments.

This constitution may be amended at any annual meeting or at any special meeting called for that purpose, provided that two-thirds of all members present vote for such change; and provided further that at least 10 days' notice of such proposed amendment shall have been given the members.

BY-LAWS.

1. Members must deliver to the circle all eggs produced by their hens, except those for home use, and those from stolen nests of unknown age.

2. Eggs must be gathered daily (twice daily in hot or muggy weather) and kept in a cold place. No eggs older than 7 days shall be delivered to the collector. Artificial eggs only may be used as nest eggs, and the nests must be kept clean. Broody hens must be confined away from nesting places.

3. Members may deliver eggs to the circle only from their own hens.

4. The manager shall have power to pay a higher price for white or brown shelled eggs, according to the demands of the market. Eggs that do not average 24 ounces to the dozen shall be paid for by weight on the above basis.

5. With the exception of during the mating season, all male birds must be kept apart from the flock of hens. The manager shall have power to pay a small premium for these infertile eggs, if the market warrants.

6. The manager may refuse to accept "dirties." If accepted, they shall be taken at a discount. Eggs must not be cleaned.

(If the eggs are brought to a central house for packing, the following by-law applies:)

7. Each member shall receive a rubber stamp, giving the brand of the circle and the recorded number of the member. Each egg must be stamped plainly and neatly on the big end. Only fresh, clean eggs of standard weight, and uniform color may be packed in the cartons, holding a dozen each, the cartons being furnished by the circle, and the member's stamp also being placed on the face of the carton. In case any complaint is received in regard to any eggs, the member whose stamp is on the eggs shall be charged with any expense of settlement made necessary by his carelessness.

(If each member is permitted to pack the eggs, the following by-law applies:)

8. All eggs shall be collected and delivered to the circle packing house by such means

as the annual meeting may determine. Each member shall be given a receipt for the number of eggs he delivers. These eggs shall be candled, graded and packed by the manager or his assistants and each member be given credit for the number of each grade. All eggs of the same grade shall then be pooled, and when sold payment shall be made on the basis of the price received for each grade, less all necessary expenses.

9. The manager shall be paid a commission of . . . per cent, on the net sales of the business, not to exceed a total amount of \$ per year.

10. Any member failing to live up to these by-laws may be expelled from membership or sufficient sum withheld from his sales to reimburse the circle for any loss occasioned by his failure. In all such cases the member shall first have the right to be heard before the board of managers.

11. Members may voluntarily withdraw from the circle, to take effect only at the end of the business year, by giving 30 days' notice to the manager.

COMMUNITY EGG CIRCLE RECEIPT FORMS

Instructions for Printing and Binding

Forms A, B, and C should be numbered in triplicate. Form A (original) should be printed on white paper, Form B (duplicate) and Form C (triplicate) on paper of different tints, preferably light bond, and bound in books of 25 numbers to the book. Forms B and C should be perforated.

Instructions for Use

The collector enters the total number of eggs received from a member in the spaces provided on Form A, using carbon sheets so that the date, member's name, circle number, and number of dozen eggs collected are given on all three forms. The collector, at the time of collection, delivers Form C to the member, which is a receipt for the number of eggs delivered to the collector.

At the end of the day the book containing the original and duplicate copies, Forms A and B, is turned in at the office.

As the eggs are candled and graded the number of dozens of each grade is placed upon Form A by the grader, the same information being shown on the carbon, or Form B. This then gives the member the proper credit for the number of dozens of each grade delivered.

Settlement is made for each pool or delivery, which in most cases will be covered by one receipt for each member. As returns for the shipments are received the amount due each member will be carried out in the price and total columns of Forms A and B. Check is then drawn for the amount due and for-

warded to the member with Form B, which gives a statement of returns and a duplicate of the receipt which the member holds with the additional information of the grading and amount received for each grade. Form A remains in the book and is kept on file in the office to serve as a permanent record of settlements with the producer.

IF YOU ARE THE LEAST BIT INTERESTED IN

S. C. BUFF ORPINGTONS

THAT ARE MATED FROM HIGH EGG RECORDS YOU SHOULD WRITE US FOR OUR 1916 MATING LIST.

CHERRY LANE FARM CO.

O. Wilson, Mgr.

Oak Hill, West Va.

Congdon's Barred Rocks

Bred for Utility and Beauty

Write your wants in Cocks, Cockerels, Hens, or Pullets. \$2,000 invested, 20 years' experience. **INCUBATOR EGGS, \$5.00 per 100, \$40.00 per 1,000.**

NEW BOOKLET FREE

W. A. CONGDON,

Box 404,

WATERMAN, ILL.

BARRED PLYMOUTH ROCK FIRST PRIZE COCKEREL



New York

(Palace Show)

**In a Class of
28 Competing**

Others advertise big winnings where there is no competition, which means nothing, but our NEW YORK VICTORY speaks volumes for the quality of our birds.

STOCK AND EGGS FOR SALE.

The World's Best.

SEND FOR MATING LIST:

SAMUEL WILLETTS,

Brighthelm Farms,

Roslyn, L. I., N. Y.

ORCHARD FARM REDS

Look up our complete winnings at Pittsburgh and Madison Square Garden and write at once for mating list.

ORCHARD FARM,

NOROTON HEIGHTS, CONN.

KEELER'S WHITE WYANDOTTES THE IDEAL SHOW AND UTILITY STRAIN

Five firsts Chicago, 1916. Egg record up to 285.

Peace time prices on adult stock, June, July and August. Send for special sales list.

2000 FEBRUARY, MARCH AND APRIL CHICKS GROWING.

CHAS. V. KEELER,

R. F. D. 17,

WINAMAC, IND.

RANCHO DEL MARTINO

PANAMA-PACIFIC FIRST PRIZE WINNERS.

SINGLE COMB WHITE LEGHORNS

EXHIBITION STOCK FOR THE EARLY SHOWS.

MRS. E. B. MARTIN,

DOWNY, Los Angeles County, CALIFORNIA

WRITE FOR FREE ILLUSTRATED CATALOGUE.

Forms.
(Form A.)

Folio.....

Farmville Poultry Circle, Farmville, Va.
Office copy of member's receipt.

No.....

Date,....., 191..

Received ofCircle No.....the following:

	No.	Price-	Total.

Paid by check No.....

Checked by.....

Date, 191..

Collector

(Form B.)

No.....

Farmville Poultry Circle, Farmville, Va.
Statement of returns and copy of member's Receipt.

Date collected,....., 191..

Mr., Circle No., the inclosed check is in payment of the following:

	No.	Price.	Total.
Less			
Total of check			

Checked by.....

Collector

Manager

(Form C.)

Farmville Poultry Circle, Farmville, Va.
Member's receipt.

Date,....., 191..

Received ofCircle No.....the following:

Collector.....

To Member: Keep this receipt and compare with monthly statement sent you by Circle office.

CORNWALL POULTRYMEN CELEBRATE

In celebration of the Fifth Anniversary of its existence, the Cornwall (N.Y.) Poultry Association held a chicken show in the Firthcliffe Club on June 15th, at which members and their wives or lady friends were Judges, the chickens being in the form of salad.

About 100 partook of the good things provided and enjoyed a sociable hour afterwards. It all arose from a suggestion at the Annual Meeting in May, that, in order to promote sociability and get the ladies interested, it would be a good idea to hold a chicken supper. The suggestion was promptly acted on and promises of chickens, cakes or cash were received from various members. F. W. Mailler was made chairman of the Committee on Arrangements, and enlisted the assistance of his daughter, who prepared the repast in fine style, which elicited complimentary remarks from almost all present.

The spontaneity of the entire thing was a splendid indication of the fraternal spirit, which is so great a factor in the success of this Association. Members and their wives were present from Newburgh, Highland Falls, Marlborough, Mountaineville, Meadowbrook and other surrounding places and contributed their share of the music and dancing which followed the repast.

A number of new members were received and it is hoped that former members who have not renewed their membership will do so at an early date, if possible.

Geo. H. C. Hale, Sec'y.

CLEVELAND INDUSTRIAL EXPOSITION

The Cleveland Poultry Breeders Association have again demonstrated that they are a live organization by their willingness to cooperate with the Cleveland Chamber of Industry in giving Cleveland a live Poultry Show this fall. Because of the fact that there will be no fair held at North Randall this fall, the Cleveland Chamber of Industry

decided to take advantage of it and are going to conduct a large Industrial Exposition and Fair, which will be made up of eight distinct feature shows.

One of the most interesting will be the Poultry Section, held under the direction of the Cleveland Poultry Breeders Association. A special committee appointed to represent the C. P. A. is composed of Frank C. Stier, Chairman, A. E. Rehburg, Secretary, Chas. E. Ackerman, Supt., and J. E. Busch, Judge. Premium lists are now in preparation and will be sent to all those sending their names and addresses to N. A. Vinson, Manager, Industrial Exposition and Fair, 1393 W. 25th St., Cleveland.

GREEN CUT BONE

Green cut bone may be fed to advantage to adult fowls and large chickens, but it is not suitable for chicks less than three months of age. It should always be introduced in small quantities until the birds become accustomed to it; one ounce a day per fowl is the maximum amount. Green cut bone may furnish all the animal food required. However, best results are obtained where some beef scraps are fed; these and desiccated fish are the most popular animal foods. Green cut bone will deteriorate rapidly if kept more than a day or two after cutting. It needs to be spread out thin in a cool place to prevent it from heating. When fresh cut it is worth around three cents a pound.

AMERICAN BARRED PLYMOUTH ROCK CLUB

Secretary C. J. Behn, 7537 So. Sangamon St., Chicago, has received recently eighteen new members to the American Barred Rock Club from Trinidad, B. W. I. This new branch of the American Barred Rock Club in Trinidad has just been organized and shows the over reaching popularity of the Barred Plymouth Rock, even in the foreign ports.

Breeders' Special Display Cards

Advertisements of uniform size inserted under this heading at \$2.50 per month in advance; six months for \$13.50 or \$2.00 per month by the year, payable quarterly in advance.

Palmer's White Rocks

ARE BRED FOR
UTILITY AND QUALITY
BABY CHICKS

The Glen Poultry Farm, R.F.D., Fairport, N. Y.

S. C. WHITE LEGHORNS
A Utility Flock of Quality

Won first hen Grand Central Palace, New York City, 1915. Stock and Hatching Eggs at reasonable prices. 17

Locust Grove Farm Eatontown, N. J.

JOHN E. STOLL Breeder of White Plymouth Rocks and White Wyandottes

1913 White Rock winners 1 cock, 1 hen, 1-2 pullet, 2 pen. 1915 winners white Wyandottes. Forest City Fair, 1 cock, 1 hen, 1 cockerel, 2-3 pullet 1 pen. 76

3311 E. 105 St., Cleveland, Ohio

White Wyandottes

Regals win! Hatching eggs \$1.50 per setting. Six pullets and one cockerel, eight weeks old, \$5.00. Get your winners now! 46

Mt. Rydal Farm, Amherst, Va.

BUFF LEGHORNS
AND WATER FOWL
QUALITY ONLY WRITE ME

L.B. McDONALD FARM R.D.6 SPRINGFIELD O

Hutchinson's White Orpingtons

THE SOUTH'S BEST

Cockerels \$5.00 up. Eggs \$3.00 per 15.
1916 Catalogue upon request. 17

Hutchinson Farm, Box 595-W, Valdosta, Ga.

"E. F. Schweikert's" Barred Rocks

Winners of 14 silver cups. Winning 6 firsts, 1 second, 1 fifth, also two silver cups at the Ohio State Poultry Show, Dayton, Ohio, December, 1915. Prizes won at poultry shows 33 firsts, 21 seconds, 19 thirds, 11 fourths, 9 fifths. Eggs from this high class exhibition stock \$5.00 per setting. 76

E. F. SCHWEIKERT, SPRINGFIELD, OHIO

BARRED ROCKS

Winners at the Great Panama-Pacific International Exposition. Pullet won championship ribbon at Springfield, Ohio, for best pullet in entire show.

Guaranteed eggs from these prize winners \$5.00 per setting. 17

G. H. Mayne, Springfield, Ohio.

THE J. S. J. AUTOMATIC AND TRAP NESTS
Won First Prize and Gold Medal at Panama-Pacific Exposition

Separate layers from non-layers automatically without attention. Write for booklet and prices.

JORDON & CHAPMAN MFG. CO., INC.

221-225 No. Central Ave., 126 Staunton, Va.

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RATES:—Classified advertisements will be inserted in this department of AMERICAN POULTRY WORLD at 5 cents a word per month for one or two months, or at 4 cents a word per month for three or more months. Change of copy allowed quarterly without extra cost. No order accepted for less than 50 cents for each insertion. Numbers, initials and abbreviations count as words. No display allowed other than initial word or name.

TERMS:—Cash with order and copy of advertisement. Positively no exceptions to this rule. Please count the words correctly to avoid delay in publishing. Write copy of your advertisement plainly to insure its appearing correctly. Copy must reach AMERICAN POULTRY WORLD office by 18th of the month preceding date of issue.

AMERICAN POULTRY WORLD is furnished every classified advertiser without charge during the time his advertisement appears in these columns.

We guarantee to publish an average **monthly circulation of 45,000** copies during the year ending with April, 1916.

"BECOME IDENTIFIED WITH A WINNER."

ANDALUSIANS

BLUE ANDALUSIAN COCKERELS, fine large birds. Good color. Prices reasonable. Harry Cotting, Rhinebeck, New York. 3-10-6

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ALL BREEDERS of Bantams should procure a copy of the "Bantam Book". Fully describes all varieties and tells how to feed and care for them. Just what the beginner wants to know. Send 50c. today to AMERICAN POULTRY PUBLISHING CO., Buffalo, N. Y. tf

BRAHMAS

SEE RIVERDALE POULTRY FARMS advertisement, Light and Dark Brahmans, page 758. tf

SEE MY ADVERTISEMENT on page 742. Harvey C. Wood, Box 75, Bound Brook, N. J. tf

WOOD'S LIGHT BRAHMAS win right along at both New York Shows, Boston, Chicago Coliseum, etc. Egg prices reduced and some splendid breeders at bargain prices after June 1st. Harvey C. Wood, Box 75, Bound Brook, N. J. tf

CAMPINES

ALL ABOUT CAMPINES—The new Campine book just out. 88 pages and cover. Profusely illustrated. Full page plate of Golden and Silver Campines in colors. The most complete treatise on the variety ever prepared. To breed properly you should have a copy. Price 75 cents, postpaid. Address all orders AMERICAN POULTRY WORLD, Buffalo, N. Y.

IMPROVED SILVER CAMPINES. Choice stock reasonably priced. Rev. W. Berberich, Groton, N. Y. tf

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COCHINS ALL VARIETIES as well as Brahmans and Langshans are described in the book "The Asiatics", the only complete treatise on the oldest fowls in existence. A copy will be sent postpaid upon receipt of 50c. cash or stamps to AMERICAN POULTRY WORLD, Buffalo, N. Y. tf

DUCKS

A COPY OF DUCKS AND GEESE should be in the hands of every breeder of water fowl. Contains the origin of the Ducks. Describes the different Standard varieties. Tells about the wonderful Duck Industry on Long Island and abroad. 104-pages, 8½ x 11½. Price 75 cents. American Poultry World, Buffalo, N. Y. tf

LEGHORNS—BROWN

SEND YOUR ORDER today for a copy of "The Leghorns", the most complete treatise on your favorites ever written, three full page illustrations in colors, one showing correct plumage color of male and female Brown Leghorns. 144 pages—price \$1.00 postpaid. AMERICAN POULTRY WORLD, Buffalo, N. Y. tf

LEGHORNS—R. C. BUFF.

ALL BREEDERS of Buff Leghorns should send today for a copy of the Book "The Leghorns", the last word on this popular fowl. Contains beautiful plate of Buffs in natural colors. 144 pages, profusely illustrated. Send \$1.00 today for copy. May be returned if not as represented. AMERICAN POULTRY WORLD, Buffalo, N. Y. tf

FISK'S ROSE COMB BUFF LEGHORNS are Madison Square Garden winners. Catalogue. Howard J. Fisk, Box N, Falconer, N. Y. 12-2-7

LEGHORNS—S. C. BUFF

EGG-BRED BUFF LEGHORNS. (Single Comb) Elegant breeders, eggs and chicks priced right. Circular. L. M. Munger, DeKalb, Ill. tf

LEGHORNS—WHITE

WHITE LEGHORN breeders and fanciers should have a copy of "The Leghorns" all varieties, the latest and most complete treatise on this popular fowl. Will give you many valuable pointers on care, feeding and conditioning. 144 pages, profusely illustrated. Three color plates. Postpaid \$1.00. AMERICAN POULTRY WORLD, Buffalo, N. Y.

PULLETS, yearling hens, any number. Wyckoff Single Comb White Leghorns. 25 years in this business. Hundreds customers, largest plants say I furnish greatest layers possible. Circulars, lower prices, full information. C. N. Reynolds, Canton, Pa. 4-10-16

CYPHERS HIGH PEDIGREED S. C. WHITE LEGHORN breeding hens, dams 216 to 235 sire 288 eggs. Also Cyphers and Barron-Cam cockerels, sires 282, 288. Prices reasonable, write, The Read Poultry Farm, Watervliet, N. Y. 7-9-16

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"MINORCAS OF EVERY COMB AND COLOR" is the title of the very latest book on this breed. The author is George H. Northup, known far and wide as one of the foremost breeders and judges of the country. This well written, well illustrated book, by one of the greatest authorities, will prove valuable and instructive to all lovers of Minorcas. This book contains 160 pages and has a chapter on each of the following subjects: History of Minorcas; Hardiness of Black Minorcas; Description of Single Comb Black Minorcas the Minorca as a General Purpose Fowl; Origin of Rose Comb Black Minorcas; Progress of Rose Comb Black Minorcas; the comparative value of Rose and Single Comb Black Minorcas; How to Select and Mate Minorcas; the time of year to hatch Minorcas; Hatching and Rearing Minorca Chicks; Influence of Color Breeding on Color of Eggs; Color and Development of Color in Black Minorcas; Fitting Minorcas for the Show Room; History of Single Comb White Minorcas, Rose Comb, White Minorcas, Buff Minorcas, Mottled Minorcas and Barred Minorcas. Mailed, postage prepaid, on receipt of price, 50 cents. AMERICAN POULTRY WORLD, Buffalo, N. Y. tf

ORPINGTONS—BLACK

EVERY BREEDER OF BLACK ORPINGTONS should read the Orpington Book. Tells about the Standard requirements, how to mate and breed them for best results, edited by J. H. Drevenstedt. Fully illustrated. Price 75 cents, postpaid. American Poultry World, Buffalo, N. Y. tf

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CHOICE BLUE ORPINGTONS at reasonable prices. Rev. W. Berberich, Groton, N. Y. tf

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Don't fail to secure a copy of the New Standard before you attempt to mate your breeding pens. You cannot mate correctly without a copy of this book. It is the recognized American authority on all matters pertaining to breeding and exhibiting poultry.

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Start right by securing a copy now, price postpaid, cloth binding \$2.00, leather binding \$2.50, or a copy and American Poultry World one year for 25 cents additional to U. S. subscribers, 50 cents additional to Canada. Address all orders

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Book Dept.

BUFFALO, N. Y.

*** We would like readers suggestions on how we can improve A. P. W.

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THE ORIGIN AND HISTORY of all varieties of Orpingtons, described in the Orpington Book. Every breeder of Orpingtons should have a copy. Price 75 cents. **AMERICAN POULTRY WORLD**, Buffalo, N. Y. tf

FOR THE BEST ORPINGTONS any variety, you must send to their originators. **William Cook & Sons**, Box W, Scotch Plains, New Jersey. Send for catalogue. tf

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\$\$\$\$ IN PIGEONS! Start raising squabs for market or breeding purposes. Make big profits with our Jumbo Pigeons. We teach you. Large free illustrated, instructive circulars. **Providence Squab Co.**, Providence, R. I. 12-10-6

I OFFER GUARANTEED mated Homers in any quantity at \$1.00 pair and challenge Squab companies or dealers to produce better stock at twice this price. Beautiful white Homers, \$1.50 pair. Get my prices on Runts, Carneaux, Maltese, Hens and save dollars. **SQUAB MANUAL**, 25 cents. **Charles Y. Gilbert**, 346 North American St., Philadelphia, Pa. 6-8-6

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THE PLYMOUTH ROCK BOOK. The most complete work on all varieties of Plymouth Rocks ever published, contains 144 pages, 3 color plates and many half-tone illustrations. Tells how to mate, breed and exhibit all varieties of this popular fowl. Edited by **Wm. C. Denny**, price \$1.00 postpaid. Address, **AMERICAN POULTRY WORLD**, Buffalo, N. Y. tf

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AMERICA'S CHAMPION PARTRIDGE ROCKS. See our ad on page 741. tf

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WHITE PLYMOUTH ROCK breeders should secure a copy of the Plymouth Rock Book. Invaluable for beginners or experienced breeders. Edited by **Wm. C. Denny**. One dollar will bring a copy post-paid. Address, **American Poultry World**, Buffalo, N. Y. tf

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EVERY BREEDER OF ROSE AND SINGLE COMB Rhode Island Reds should read the Rhode Island Red Book. Gives complete history of this popular variety. Tells how to mate and breed for best results. Edited by **D. E. Hale**. Fully illustrated. A standard for Red Breeders. Price per copy 75 cents, postpaid. Address **AMERICAN POULTRY WORLD**, Buffalo, N. Y. tf

SUSSEX

SPECKLED SUSSEX. Choice stock reasonable. Eggs. **Rev. W. Berberich**, Groton, N. Y. tf

SEVERAL BREEDS

POULTRY AND PET STOCK. A money making combination. Learn all about care and management by reading **American Poultry World**, America's leading poultry magazine, and the **National Pet Stock Fancier**. In a class by themselves. Both papers one year to one address 60 cents. **American Poultry World**, Sub. Dept., Buffalo, N. Y.

20 EGGS \$1. Reds, Rocks, Orpingtons, Leghorns, Minorcas. 30 other varieties. List free. **J. A. Bergey**, Telford, Pa. tf

TURKEYS

TURKEY BOOK. Describes all varieties, tells how to mate, care for and rear, gives full instructions for exhibiting and judging. Contains full page illustrations of Bronze Turkeys in natural colors, also many other instructive and interesting illustrations. Price 75 cents postpaid. Address **American Poultry World**, Buffalo, N. Y. tf

AMERICA'S CHAMPION GIANT BRONZE TURKEYS. See our add on page 741. tf

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GET OUR PRICES before placing your order for printing. We print artistic letter heads, cards, envelopes, booklets, circulars, etc. Full line of up-to-date illustrations. Write today for samples and prices. **AMERICAN POULTRY WORLD**, 158 Pearl St., Buffalo, N. Y.

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WANTED—A representative in every town in the United States. Employ your spare time profitably. For full particulars address **AMERICAN POULTRY WORLD**, Buffalo, N. Y.

WANTED

WANTED.—Poultryman capable of handling Mammoth and small incubators, also brooders and young chicks. Single man preferred. Must be experienced. Steady position. Good pay. **Cyphers Poultry Farm**, Elma Center, N. Y.

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Will all the members please send in their articles or pictures of their birds as soon as possible for our club book? Would be very glad to receive them. Also to those who have promised to write articles, don't forget to send them in now. **Grace Nicholson**, Secretary Blue Orpington Club, Leominster, Mass.

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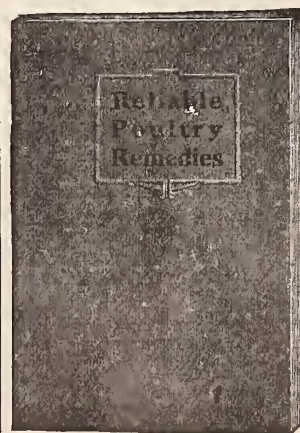
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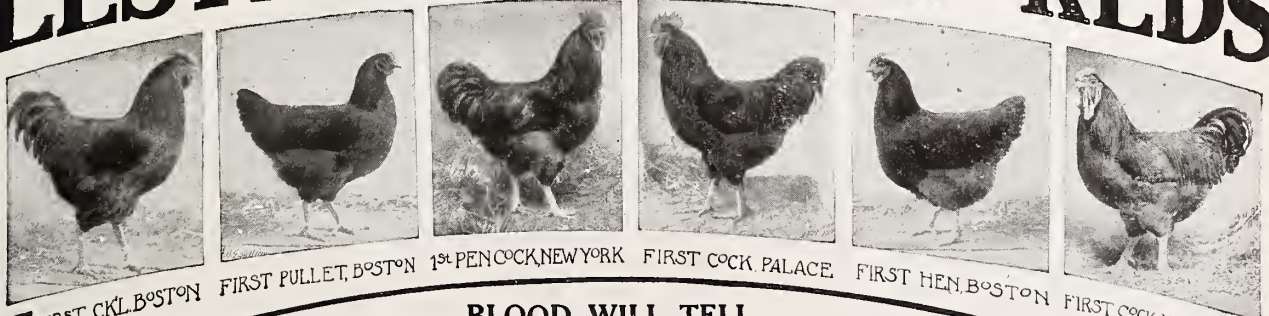


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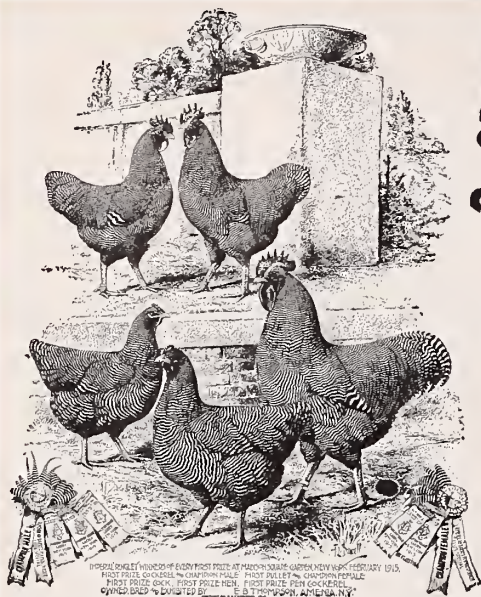
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